CDX-2250/3500

SERVICE MANUAL

US Model
Canadian Model
CDX-2250
E Model
CDX-3500

Photo: CDX-2250

SPECIFICATIONS

Model Name Using Similar Mechanism	CDX-2180
CD Drive Mechanism Type	MG-363X-121
Optical Pick-up Name	KSS-521A

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
14 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1 % total harmonic distortion.

Other specifications

CD player section

System	Compact disc digital audio system
Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit
Laser Diode Properties	
Material	GaAlAs
Wavelength	780 nm
Emission Duration	Continuous
Laser output power	Less than 44.6 μW*

* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.*

Tuner section

FM

Tuning range	87.5 – 107.9 MHz
Antenna terminal	External antenna connector
Intermediate frequency	10.7 MHz
Usable sensitivity	9 dBf
Selectivity	75 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.7 % (stereo), 0.4 % (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz

AM

Tuning range	530 – 1,710 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450 kHz
Sensitivity	30 μV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	35 W × 4 (at 4 ohms)

General

Outputs	Power antenna relay control Telephone ATT control lead
Tone controls	Bass ±8 dB at 100 Hz Treble ±8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 185 mm (7 1/8 × 2 × 7 3/8 in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 162 mm (7 1/4 × 2 1/8 × 6 1/2 in.) (w/h/d)
Mass	Approx. 1.2 kg (2 lb. 10 oz.)
Supplied accessories	Parts for installation and connections (1 set)
Optional accessories	Cleaning cloth XP-CD1 Compact disc single adapter CSA-8

Design and specifications are subject to change without notice.

FM/AM COMPACT DISC PLAYER

MICROFILM

SONY®

SERVICE NOTE

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

NOTES ON PICK-UP FLEXIBLE BOARD

The pick-up flexible board in this set is secured to the optical pick-up with an adhesive tape. Once the tape is removed, an adhering force becomes weak, and it cannot be reused.
Therefore, if the optical pick-up is replaced, replace also the pick-up flexible board with a new one.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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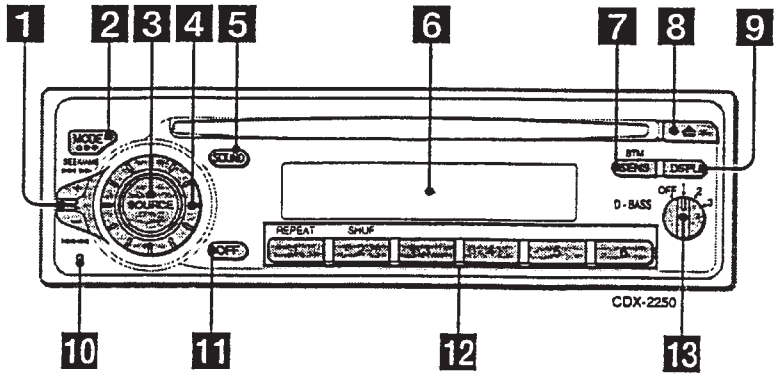
Location of controls



Refer to the pages for details.

1. SEEK/AMS (seek/Automatic Music Sensor/manual search) control 6, 8
2. MODE (band select) button 7
3. SOURCE (source select) button 6, 7
4. Dial (volume/bass/treble/left-right/front-rear control) 5, 8
5. SOUND button 5, 8, 9
6. Display window
7. SENS/BTM (sensitivity adjust/Best Tuning Memory) button 7, 8
8. ⏏ (eject) button 6
9. DSPL (display mode change/time set) button 5, 6, 8
10. Reset button 5
11. OFF button 6, 8
12. During radio reception:
    Number buttons 7
    During CD playback:
    ① REPEAT button 6
    ② SHUF button 6
13. D-BASS control 9

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Press the reset button with a pointed object, such as a ball-point pen.

Reset button

Notes
- *Pressing the reset button will erase the clock setting and some memorized program and memory functions.*
- *When you connect the power supply cord to the unit or reset the unit, wait for about 10 seconds before you insert a disc. If you insert a disc within these 10 seconds, the unit will not be reset, and you will have to press the reset button again.*

Setting the clock

The clock has a 12-hour digital indication.

Example: To set the clock to 10:08

1 Press DSPL during operation.
If the POWER SELECT function is set to "ON," go to step 2. If it is set to "OFF," set to "ON" (page 8).

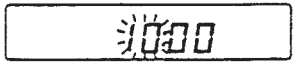
2 Press DSPL for two seconds.

The hour indication flashes.

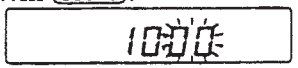
❶ Set the hour.

To go backward

To go forward



❷ Press SOUND.



The minute indication flashes.

❸ Set the minute.

To go backward

To go forward

3 Press DSPL.

The clock starts.

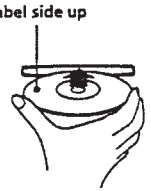
Note
If the car has no accessory position on the ignition key switch, the clock cannot be set unless the power is turned on. Set the clock after you have turned on the radio, or started CD playback.

This section extracted from US, Canadian model's instruction manual.

CD Player

Listening to a CD

Insert a CD.
Playback starts automatically.



If a CD is already inserted, press SOURCE repeatedly until "CD" appears to start playback.

Elapsed playing time

Note
To play back an 8 cm (3 in.) CD, use the optional Sony compact disc single adapter (CSA-8).

To	Press
Stop playback	⏏ or OFF
Eject the CD	⏏

Changing the display item

Each time you press DSPL during CD playback, the item changes as follows:

Elapsed playing time → Track number → MOTION DISPLAY* ← Clock ←

* *All the above items are scrolled in the display one by one in order.*

Locating a specific track
— Automatic Music Sensor (AMS)

During playback, push the SEEK/AMS control up or down and release for each track you want to skip.

To locate succeeding tracks

To locate preceding tracks

Locating a specific point in a track
— Manual Search

During playback, push the SEEK/AMS control up or down and hold for about two seconds. Release when you have found the desired point.

To search forward

To search backward

Note
If "ㄴㄴㄴㄴ" or "ㄱㄱㄱㄱ" appears in the display, you have reached the beginning or the end of the disc and you cannot go any further.

Playing a CD in various modes

Playing tracks repeatedly
— Repeat Play

Press 1 during playback.
"REP" appears in the display.

When the current track is over, it will play again from the beginning.

To return to normal playback mode, press again.

Playing tracks in random order
— Shuffle Play

Press 2 during playback.
"SHUF" appears in the display.

To return to normal playback mode, press again.

Radio

Memorizing stations automatically
— Best Tuning Memory (BTM)

This unit selects the stations with the strongest signals and memorizes them in the order of their frequencies. You can store up to 6 stations on each band (FM I, FM II, FM III, and AM).

Caution

When tuning in stations while driving, use Best Tuning Memory to prevent accidents.

1 Press SOURCE repeatedly to select the tuner.
Each time you press SOURCE, the mode changes as follows:
CD ⟷ TUNER

2 Press MODE repeatedly to select the band.
Each time you press MODE, the band changes as follows:

→ FM I → FM II → FM III → AM →

3 Press SENS/BTM for two seconds.
The unit stores stations in the order of their frequencies on the number buttons.
A beep sounds when the setting is stored.

Notes
- *The unit does not store stations with weak signals. If only a few stations can be received, some number buttons will retain their former setting.*
- *When a number is indicated in the display, the unit starts storing stations from the one currently displayed.*
- *If a CD is not in the unit, only the tuner band appears even if you press SOURCE.*

Memorizing only the desired stations

You can store up to 6 stations on each band (a total of 18 for FM I, FM II, and FM III, and 6 for AM) in the order of your choice.

1 Press SOURCE repeatedly to select the tuner.

2 Press MODE repeatedly to select the band.

3 Push the SEEK/AMS control up or down to tune in the station that you want to store on the number button.

4 Press and hold the desired number button (1 to 6) until "MEM" appears.
The number button indication appears in the display.

Note
If you try to store another station on the same number button, the previously stored station will be erased.

Receiving the memorized stations

1 Press SOURCE repeatedly to select the tuner.

2 Press MODE repeatedly to select the band.

3 Press the number button (1 to 6) on which the desired station is stored.

continue to next page →

If you cannot tune in a preset station

Push and release the SEEK/AMS control up or down to search for the station (automatic tuning).
Scanning stops when the unit receives a station. Push the SEEK/AMS control up or down repeatedly until the desired station is received.

Note
If the automatic tuning stops too frequently, press (SENS/BTM) repeatedly until "LCL" (local seek mode) is displayed. Only the stations with relatively strong signals will be tuned in.

Tip
If you know the frequency of the station you want to listen to, push the SEEK/AMS control up or down and hold until the desired frequency appears (manual tuning).

If FM stereo reception is poor — Monaural Mode

Press (SENS/BTM) repeatedly until "MONO" appears.
The sound improves, but becomes monaural ("ST" disappears).

To return to normal mode, press again until "MONO" disappears.

Changing the display item

Each time you press (DSPL), the item changes as follows:

Frequency → Clock → MOTION DISPLAY* → Frequency

* *All the above items are scrolled in the display one by one in order.*

Other Functions

Adjusting the sound characteristics

You can adjust the bass, treble, balance, and fader. You can store the bass and treble levels.

1 Select the item you want to adjust by pressing (SOUND) repeatedly.

BAS (bass) → TRE (treble) → BAL (left-right) → FAD (front-rear) → VOL (volume)

2 Adjust the selected item by rotating the dial.
Adjust within three seconds after selecting the item. (After three seconds, the dial function reverts to volume control.)

Turning on the clock display — Power Select Function

Only for cars with an accessory position on the ignition key switch

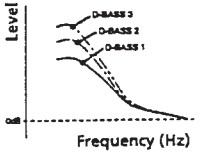
To turn the Power Select Function ON

Press (OFF) while pressing (SOUND).
The Power Select Function ties the clock display power to the accessory position on the ignition key switch.
To avoid battery wear, the clock is not displayed while the unit is initializing.

Changing the sound and beep sound

Boosting the bass sound — D-bass

You can enjoy a clear and powerful bass sound.
The D-bass function boosts the low frequency signal with a sharper curve than conventional bass boost.
You can hear the bass line more clearly even while the vocal remains at the same volume.
You can emphasize and adjust the bass sound easily with the D-BASS control. This is similar in effect to an optional subwoofer system.



Adjusting the bass curve

Turn the D-BASS control to adjust the bass level (1, 2, or 3).
"D-BASS" appears in the display.

To cancel, turn the control to OFF.

Note
If the bass sound becomes distorted, adjust the D-BASS control or volume.

Cancel the beep sound

Press (6) while pressing (SOUND).

To obtain the beep sound again, press these buttons again.

Note
If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.

Additional Information

Precautions

- If your car was parked in direct sunlight resulting in a considerable rise in temperature inside the car, allow the unit to cool off before operating it.
- If no power is being supplied to the unit, check the connections first. If everything is in order, check the fuse.
- If no sound comes from the speakers of a two-speaker system, set the fader control to the center position.
- If your car is equipped with a power antenna, it will extend automatically while the unit is operating.

If you have any questions or problems concerning your unit that are not covered in this manual, please consult your nearest Sony dealer.

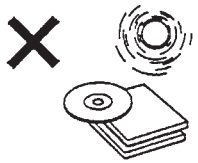
Notes on handling CDs

A dirty or defective disc may cause sound dropouts while playing. To enjoy optimum sound, handle the disc by its edge. To keep the disc clean, do not touch the surface.

Do not stick paper or tape on the labeled surface.

continue to next page →

Do not expose the discs to direct sunlight or heat sources such as hot air-ducts, or leave them in a car parked in direct sunlight where there can be a considerable rise in temperature inside the car.



Before playing, clean the discs with an optional cleaning cloth. Wipe each disc from the center out.
Do not use solvents such as benzine, thinner, commercially available cleaners, or antistatic spray intended for analog discs.

Notes on moisture condensation

On a rainy day or in a very damp area, moisture may condense on the lenses inside the CD player. Should this occur, the unit will not operate properly. In this case, remove the disc and wait for about an hour until the moisture evaporates.

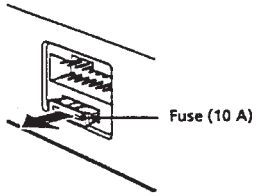
When you play 8 cm (3 in.) CDs

Use the optional Sony compact disc single adapter (CSA-8) to protect the CD player from damage.

Maintenance

Fuse replacement

When replacing the fuse, be sure to use one matching the amperage rating stated on the original fuse. If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction. In such a case, consult your nearest Sony dealer.

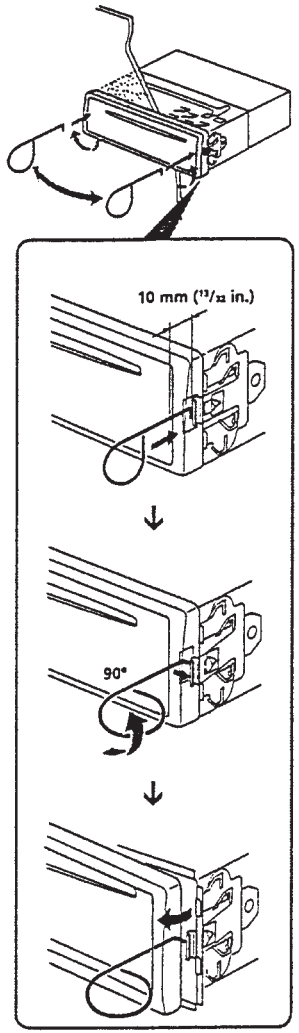


Warning

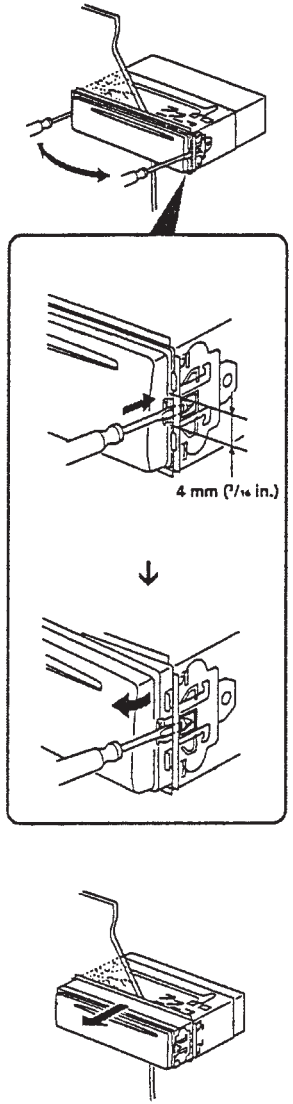
Never use a fuse with an amperage rating exceeding the one supplied with the unit as this could damage the unit.

Dismounting the unit

1 Insert the supplied tool between the unit and the frame, and rotate 90° to release the hidden mounting spring. Repeat on the opposite side and remove the frame.



2 Insert a flathead screwdriver between the bracket and mounting spring. Gently pry the spring toward the unit while pulling the unit out a little. Repeat on the opposite side and remove the unit.



Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.
- The use of optical instruments with this product will increase eye hazard.

If your car has an accessory position on the ignition key switch

— Power Select Function

To turn the Power Select function on
Press (OFF) while pressing (SOUND).
To turn the accessory position ON or OFF, the clock will be displayed or not.
To avoid battery wear, the clock is not displayed when the unit is initialization.

Reset button

When the installation and connections are over, be sure to press the reset button with a ball-point pen etc.

Connexions

Précautions

- Cet appareil est conçu pour fonctionner sur tension continue de 12 V avec masse négative.
- Avant d'effectuer les connexions, débrancher la borne de terre de la batterie du véhicule pour éviter tout court-circuit.
- Brancher les fils d'entrée d'alimentation **jaune** et **rouge** seulement après avoir terminé tous les autres branchements.
- Veiller à ne pas raccorder le fil rouge d'entrée d'alimentation à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoires.
- **Rassembler tous les fils de terre en un point de masse commun.**
- Brancher le câble jaune à un circuit libre de la voiture dont la capacité nominale est supérieure à la capacité du fusible de l'appareil. Si vous branchez cet appareil en série avec d'autres composants stéréo, le circuit de la voiture auxquels ils sont raccordés doit afficher une capacité nominale supérieure à la somme des capacités individuelles de chaque composant. S'il n'y a pas de circuits de voiture affichant une capacité égale à la capacité du fusible de l'appareil, brancher l'appareil directement à la batterie. Si aucun circuit de voiture n'est disponible pour connecter cet appareil, brancher l'appareil à un circuit de voiture supérieur à la capacité du fusible de l'appareil de telle sorte que si l'appareil grille son fusible, aucun autre circuit ne soit coupé.

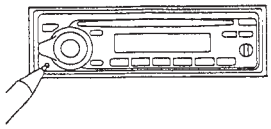
Si la serrure de contact de votre voiture comporte une position accessoires

— Fonction de sélection d'alimentation

Pour activer la fonction de sélection d'alimentation
Appuyez sur (OFF) tout en maintenant (SOUND) enfoncée.
Si vous mettez la clé en position accessoires, l'horloge s'affichera et vice versa.
Pour éviter la décharge de la batterie, l'horloge ne s'affiche pas lorsque l'appareil est initialisé.

Touche de réinitialisation

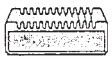
Quand l'installation et les connexions sont terminées, appuyer sur la touche de réinitialisation avec un stylo bille ou un objet pointu.



Connection diagram

Schémas de connexion

Equipment used in illustrations (not supplied)
Appareils utilisés dans les illustrations (non fournis)

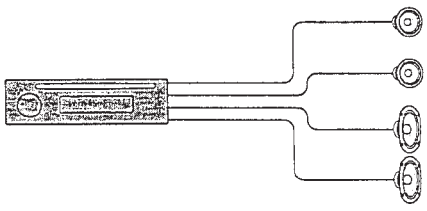


Power amplifier
Amplificateur de puissance

Front speakers
Haut-parleurs avant

Rear speakers
Haut-parleurs arrière

I



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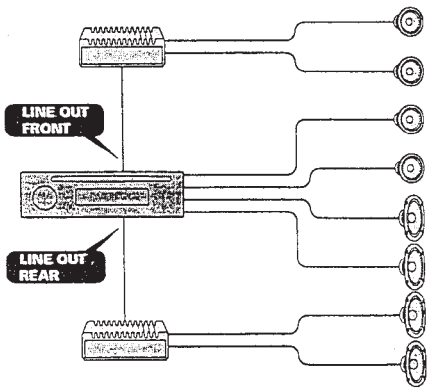
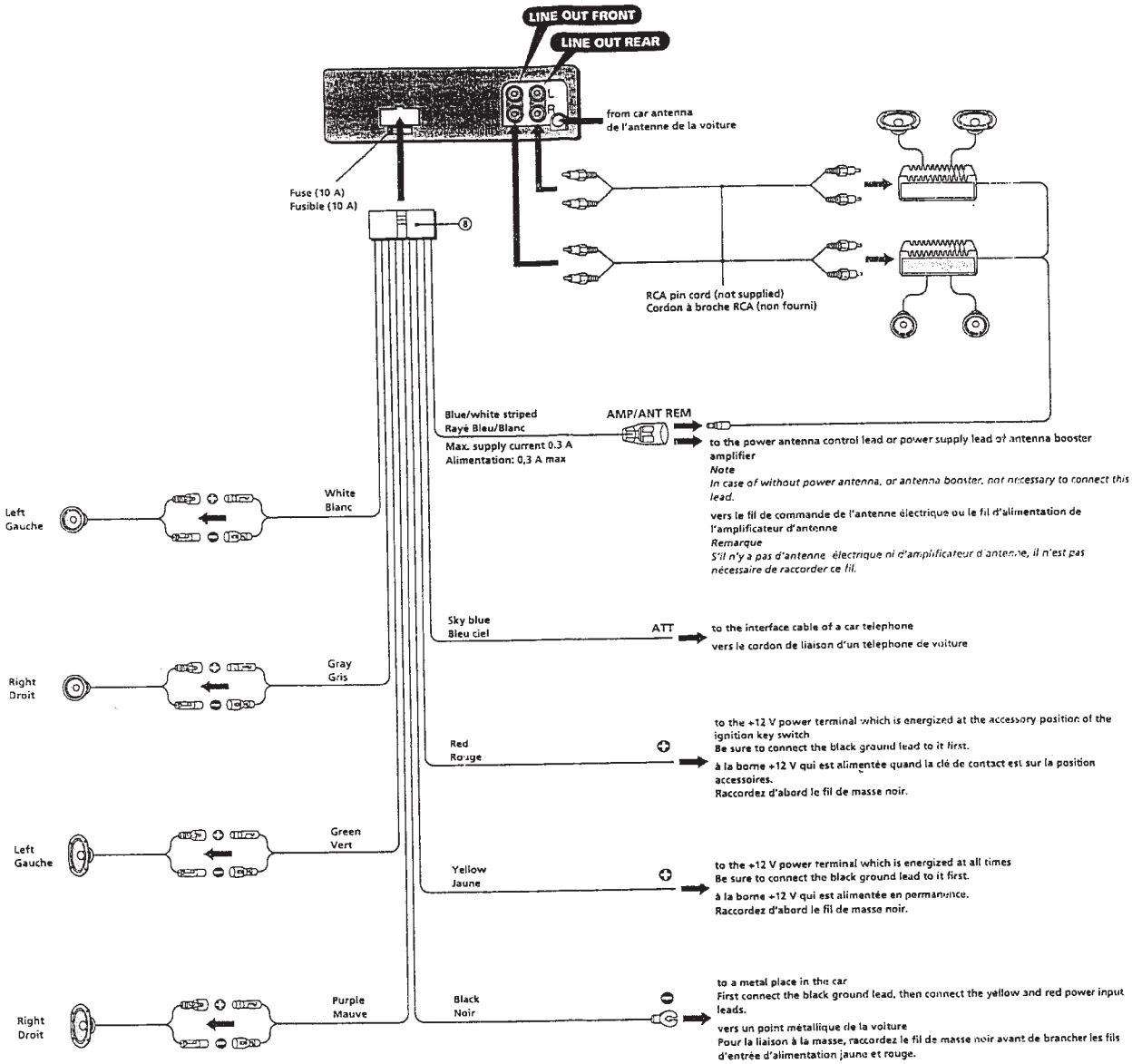


Notes
- *Be sure to connect the ground cord, before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

Remarques
- *Raccordez d'abord le fil de masse avant de connecter l'amplificateur.*
- *Si vous raccordez un amplificateur de puissance et que vous n'utilisez pas l'amplificateur intégré, le bip sonore est désactivé.*

Connection example
Exemple de connexions


LINE OUT FRONT
LINE OUT REAR
from car antenna
de l'antenne de la voiture
Fuse (10 A)
Fusible (10 A)
RCA pin cord (not supplied)
Cordon à broche RCA (non fourni)
Blue/white striped
Rayé Bleu/Blanc
Max. supply current 0.3 A
Alimentation: 0,3 A max
AMP/ANT REM
to the power antenna control lead or power supply lead of antenna booster amplifier
Note
In case of without power antenna, or antenna booster, not necessary to connect this lead.
vers le fil de commande de l'antenne électrique ou le fil d'alimentation de l'amplificateur d'antenne
Remarque
S'il n'y a pas d'antenne électrique ni d'amplificateur d'antenne, il n'est pas nécessaire de raccorder ce fil.
Left
Gauche
White
Blanc
Sky blue
Bleu ciel
ATT
to the interface cable of a car telephone
vers le cordon de liaison d'un téléphone de voiture
Right
Droit
Gray
Gris
Red
Rouge
to the +12 V power terminal which is energized at the accessory position of the ignition key switch
Be sure to connect the black ground lead to it first.
à la borne +12 V qui est alimentée quand la clé de contact est sur la position accessoires.
Raccordez d'abord le fil de masse noir.
Left
Gauche
Green
Vert
Yellow
Jaune
to the +12 V power terminal which is energized at all times
Be sure to connect the black ground lead to it first.
à la borne +12 V qui est alimentée en permanence.
Raccordez d'abord le fil de masse noir.
Right
Droit
Purple
Mauve
Black
Noir
to a metal place in the car
First connect the black ground lead, then connect the yellow and red power input leads.
vers un point métallique de la voiture
Pour la liaison à la masse, raccordez le fil de masse noir avant de brancher les fils d'entrée d'alimentation jaune et rouge.

Notes on the control leads
- *The AMP/ANT REM lead (blue/white) supplies +12 V DC when you turn on the unit. When the AMP/ANT REM lead is connected to the power antenna, the antenna will be extended as long as the unit is turned on.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection
- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Remarques sur les fils de contrôle
- *Le fil d'AMP/ANT REM (bleu/Blanc) fournit du courant continu de +12 V lorsque vous mettez l'appareil sous tension. Si le fil d'AMP/ANT REM est raccordé à l'antenne électrique, l'antenne restera déployée aussi longtemps que l'appareil sera sous tension.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

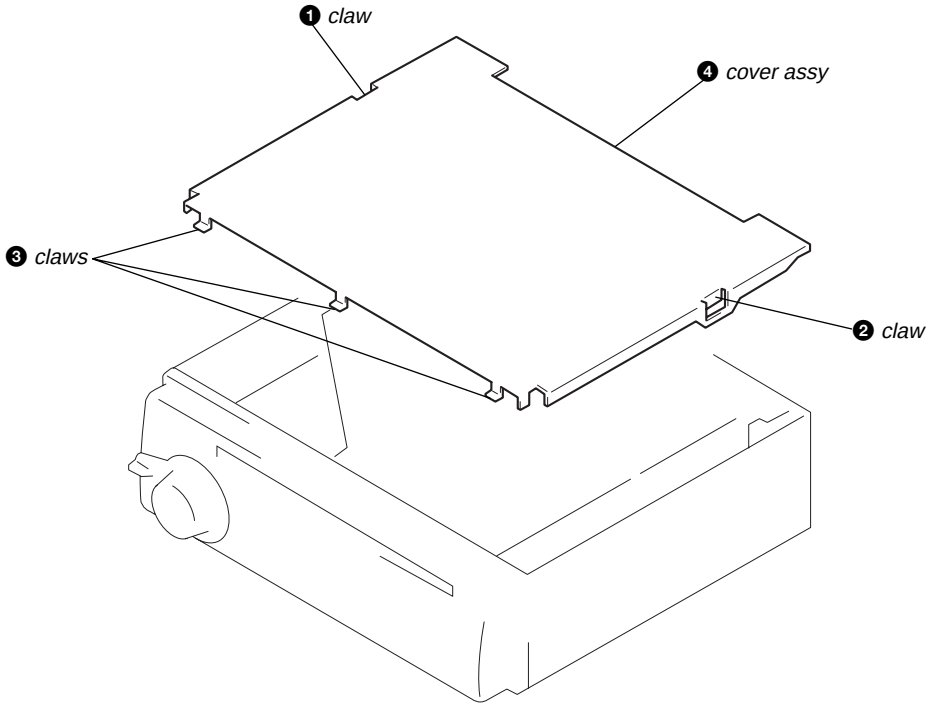
Connexion pour la conservation de la mémoire
Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur la connexion des haut-parleurs
- *Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.*
- *Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.*
- *Ne pas raccorder les bornes du système de haut-parleurs au châssis de la voiture et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne pas tenter de raccorder les haut-parleurs en parallèle.*
- *Ne pas raccorder des haut-parleurs actifs (avec amplificateurs intégrés) aux bornes de haut-parleur de l'appareil sous peine de les endommager. Veiller à raccorder des haut-parleurs passifs à ces bornes.*

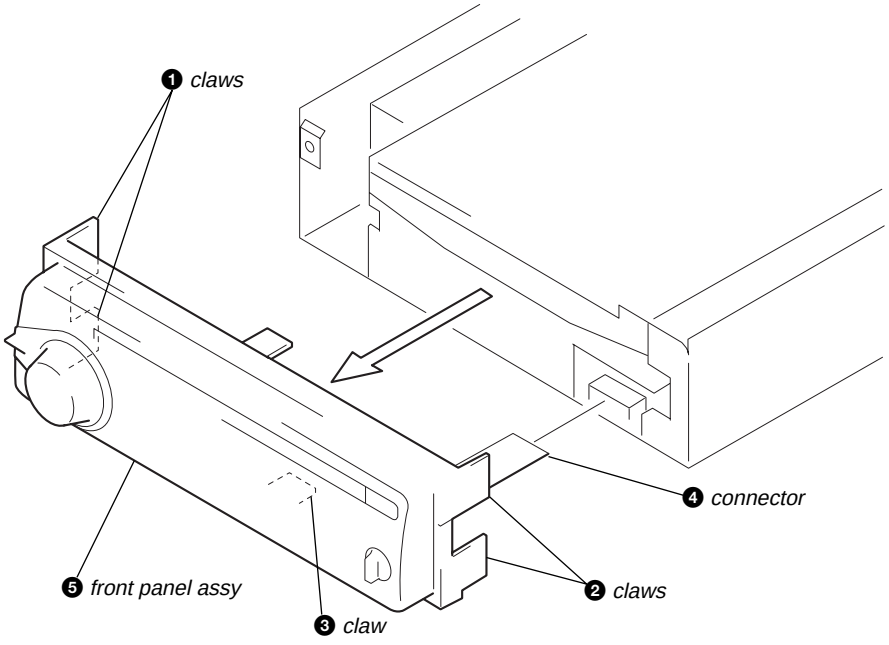
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

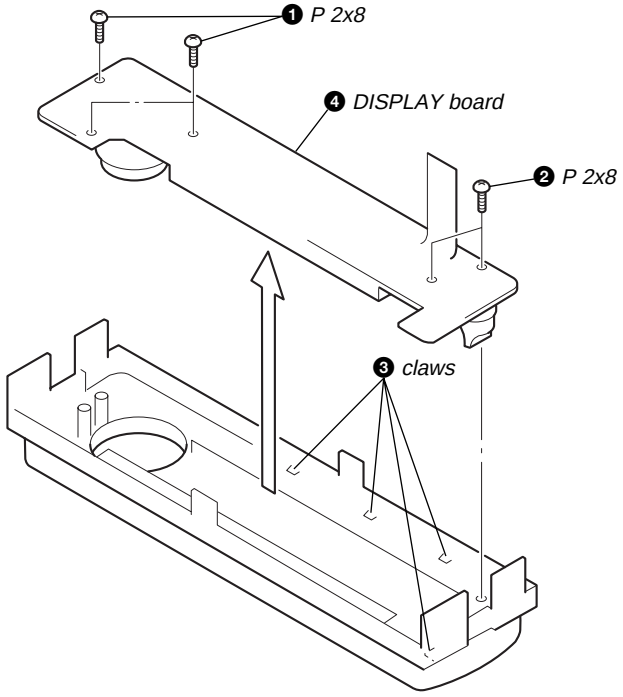
2-1. COVER ASSY



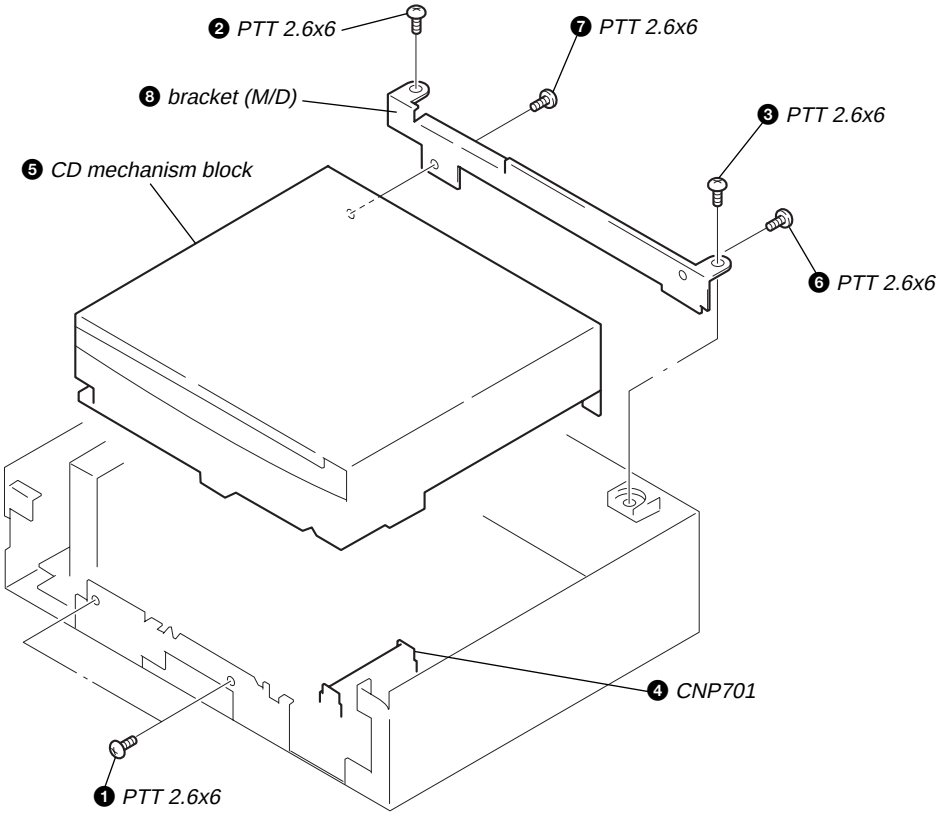
2-2. FRONT PANEL ASSY



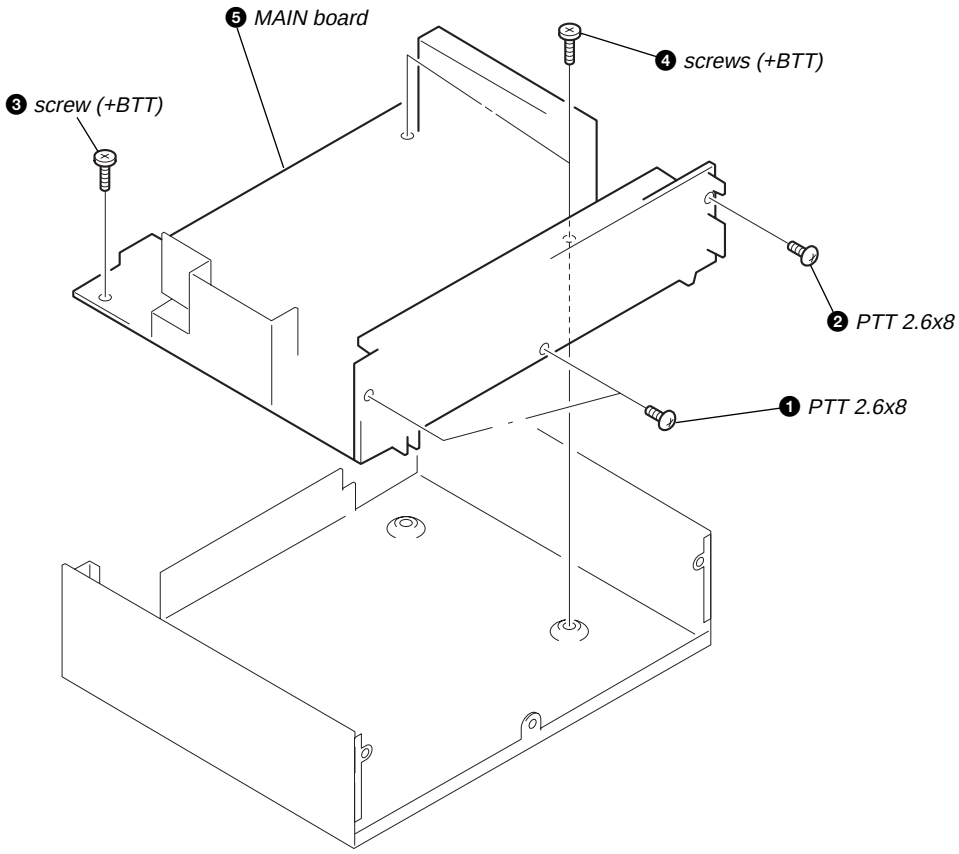
2-3. DISPLAY BOARD



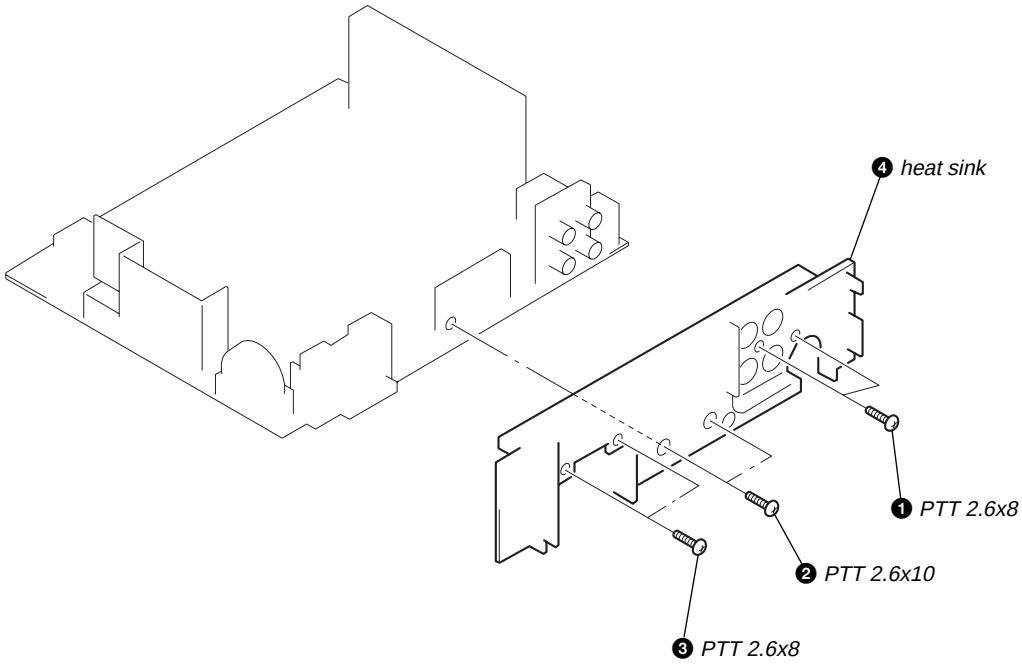
2-4. CD MECHANISM BLOCK



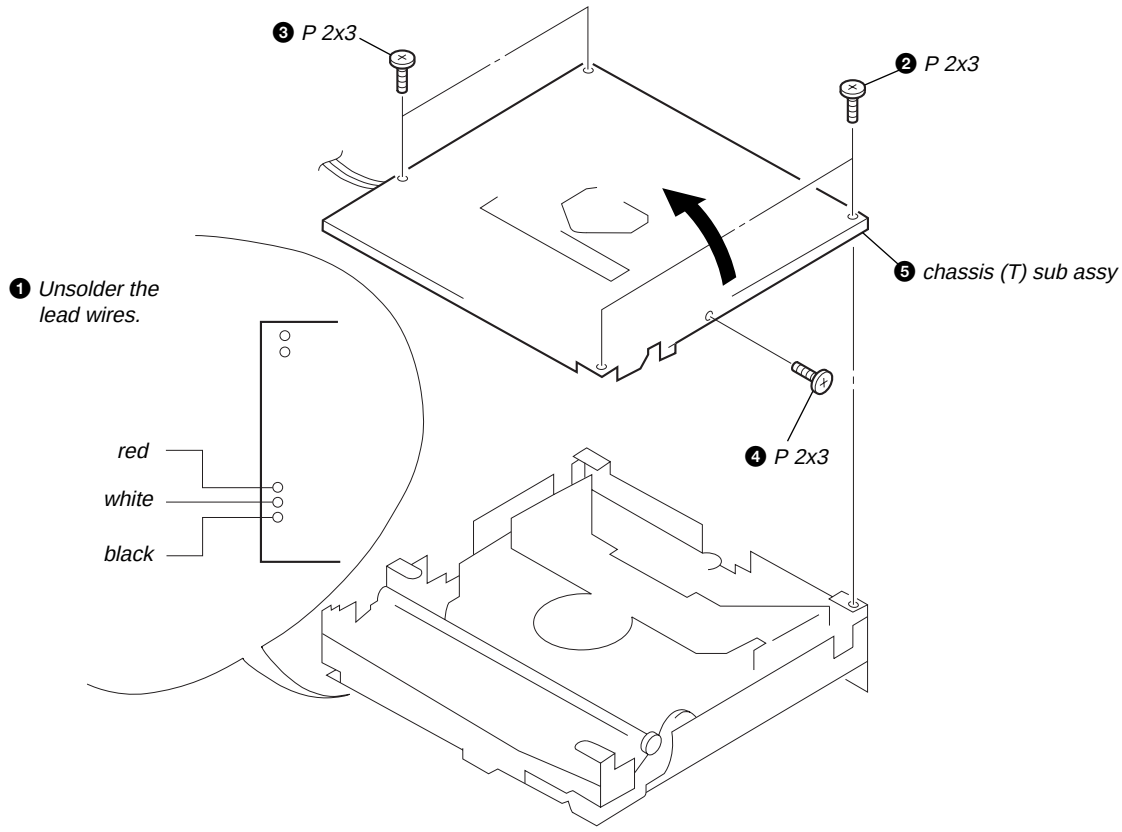
2-5. MAIN BOARD



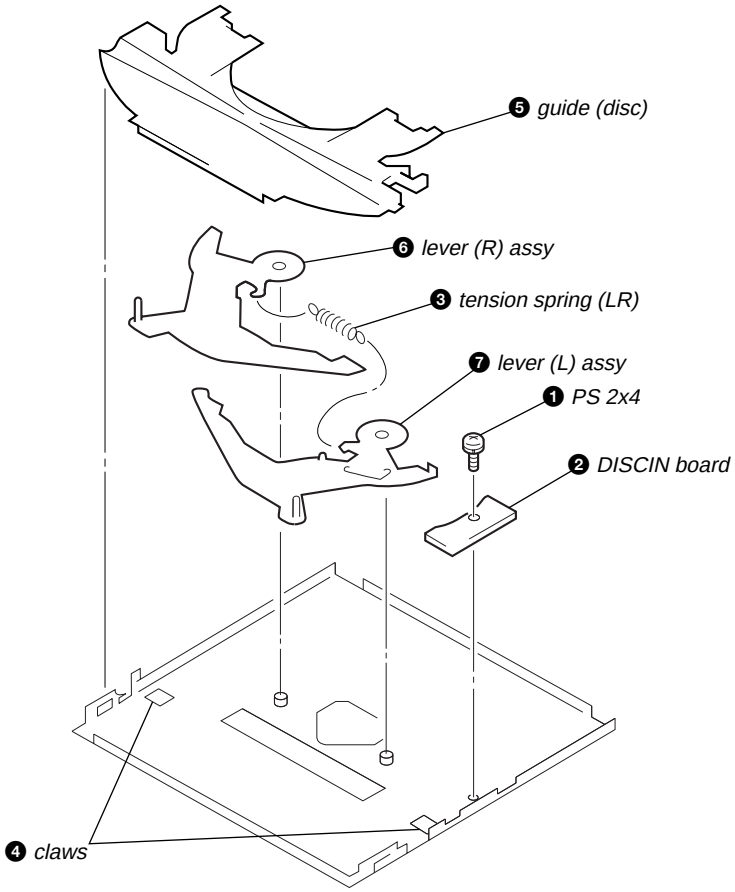
2-6. HEAT SINK



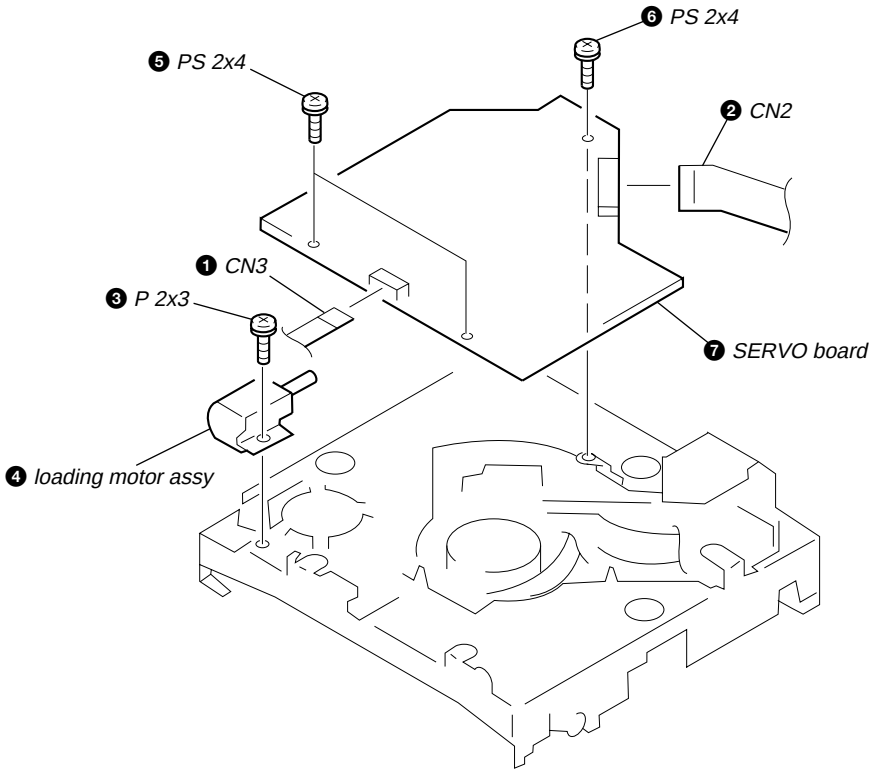
2-7. CHASSIS (T) SUB ASSY



2-8. LEVER ASSY



2-9. SERVO BOARD



2-10. ROLLER ASSY

• When installing, take note of the positions arm (roller) and washers. (Fig. 1)

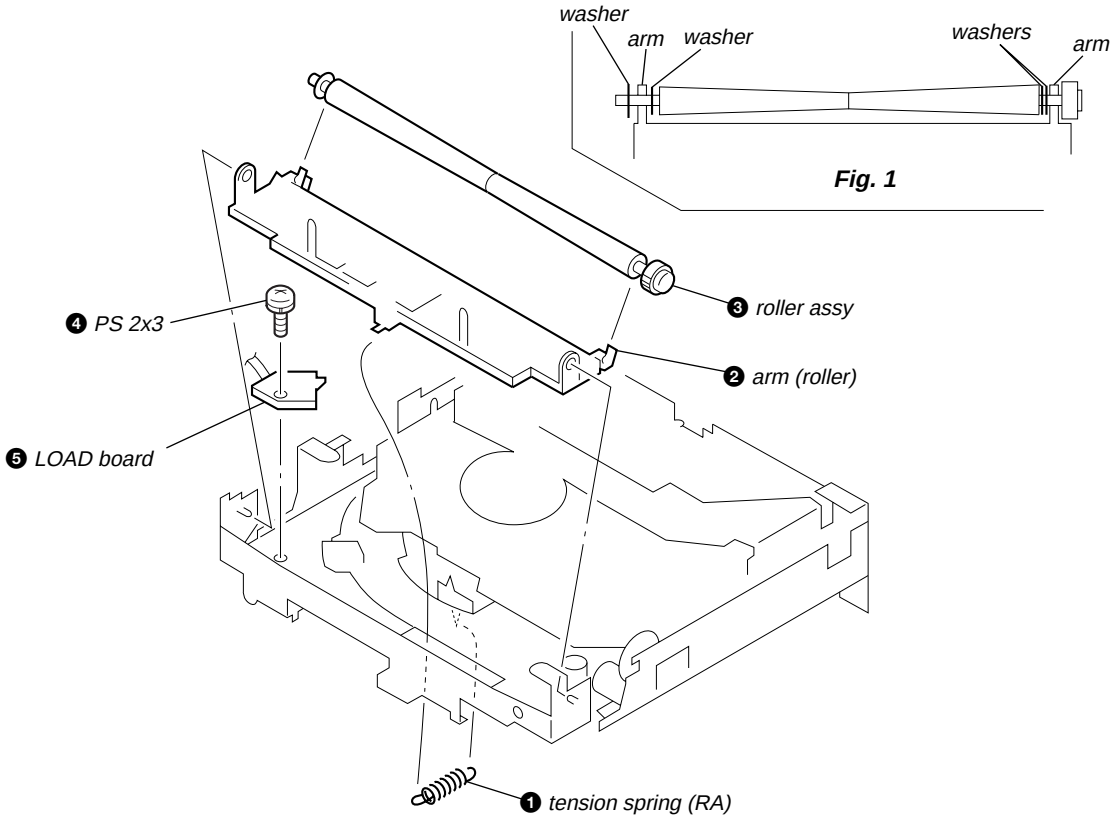
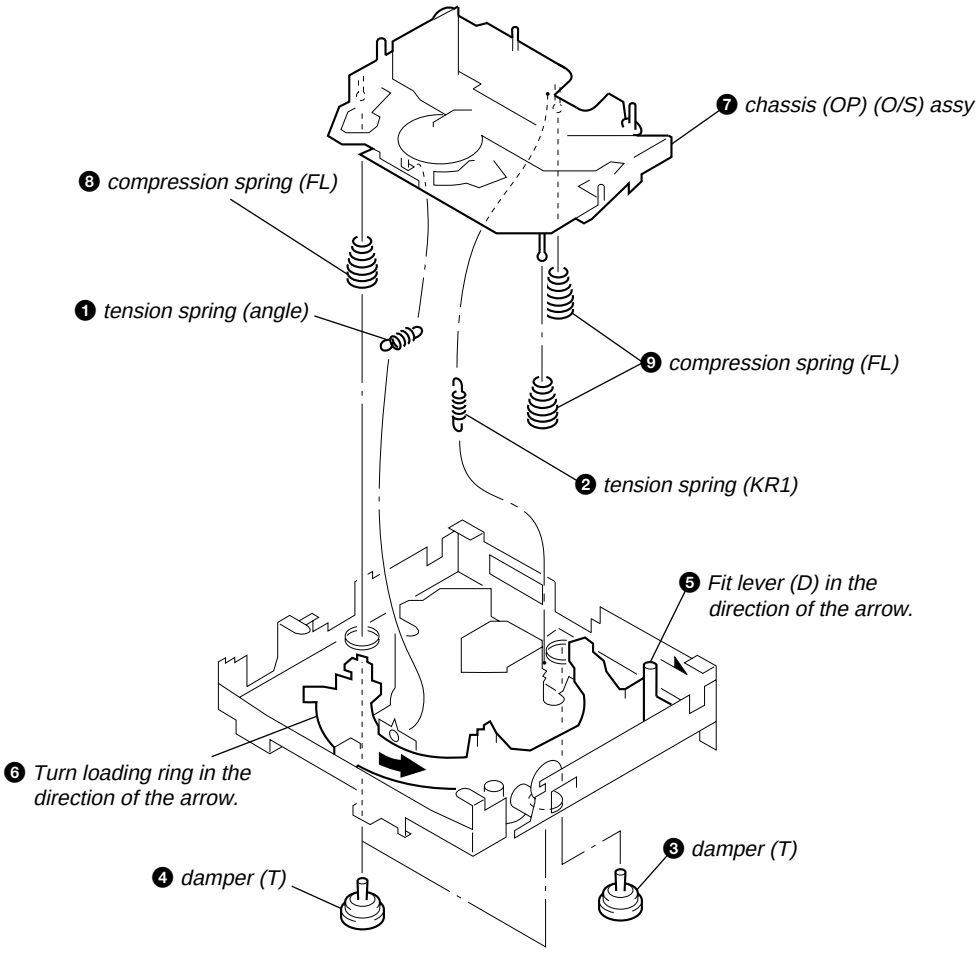
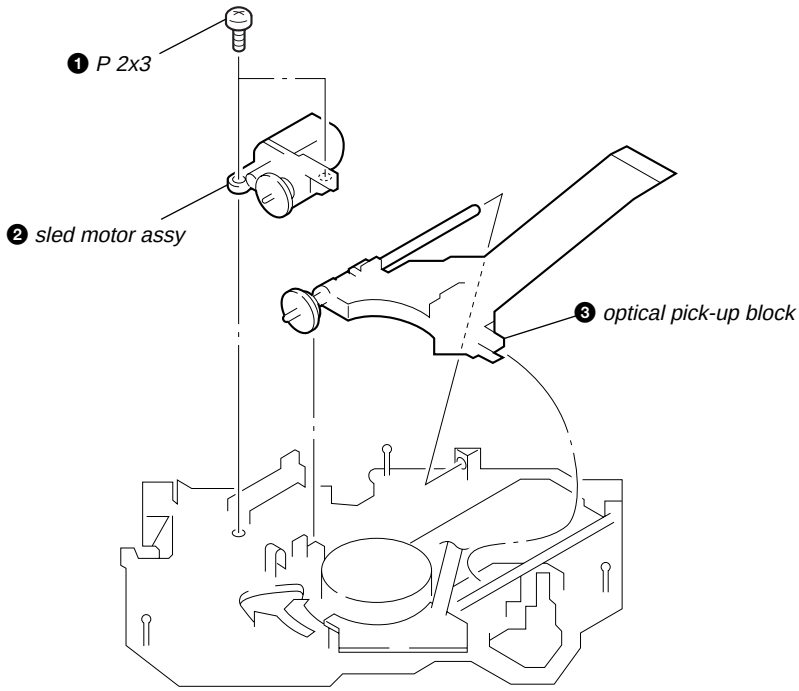


Fig. 1

2-11. CHASSIS (OP) (O/S) ASSY


❼ chassis (OP) (O/S) assy
❽ compression spring (FL)
❶ tension spring (angle)
❾ compression spring (FL)
❷ tension spring (KR1)
❺ Fit lever (D) in the direction of the arrow.
❻ Turn loading ring in the direction of the arrow.
❸ damper (T)
❹ damper (T)

2-12. OPTICAL PICK-UP BLOCK



SECTION 3
ELECTRICAL ADJUSTMENTS

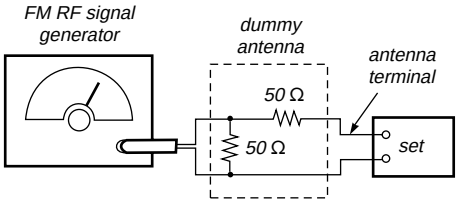
TUNER SECTION **0 dB = 1 µV**

Cautions during repair
When the tuner unit is defective, replace it by a new one because its internal block is difficult to repair.

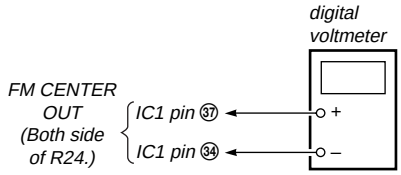
FM Center Adjustment

Setting:

SOURCE button : FMI
D-BASS switch : OFF
Frequency Select switch (E model) : FM 200K

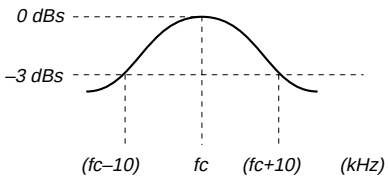


Carrier frequency : 97.9 MHz
Output lever : 60 dB (1 mV)
Mode : mono
Modulation : 1 kHz, 75 kHz deviation (100%)



Procedure:

1. Adjust IFT4 on TU01 so that the reading on the digital voltmeter becomes in 0 ± 30 mV.
2. Output an Fcenter 10 dB signal output from FM RF signal generator so that the LINE OUT REAR jack is –20 dBs.
3. Change the FM RF signal generator frequency and check the deviation of the frequency on + side and – side when the LINE OUT REAR jack drops 3 dB. (Both + side and – side is approx. 50 kHz.)
4. Re-adjust IFT4 on TU01 when the difference deviation of the frequency does more than 10 kHz.

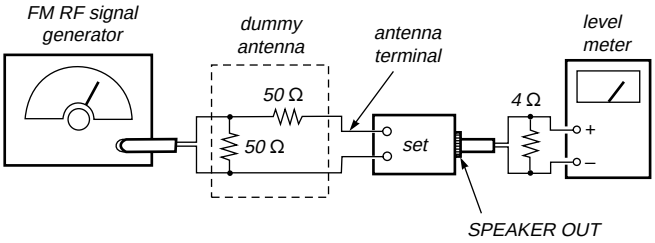


Adjustment Location: See page 17.

FM SENS/IF Adjustment

Setting:

SOURCE button : FMI
D-BASS switch : OFF
Frequency Select switch (E model) : FM 200K



Procedure:

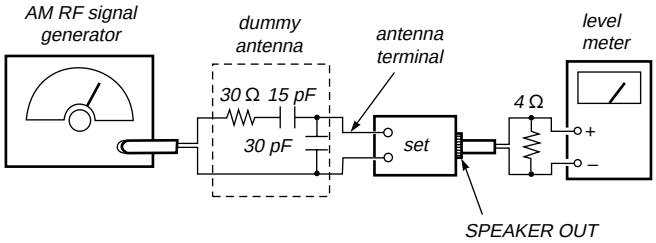
Adjust for a maximum reading on level meter.
FEB1
87.5 MHz

Adjustment Location: See page 17.

AM SENS Adjustment

Setting:

SOURCE ⟶ MODE button : AM
D-BASS switch : OFF
Frequency Select switch (E model) : AM 10K



Procedure:

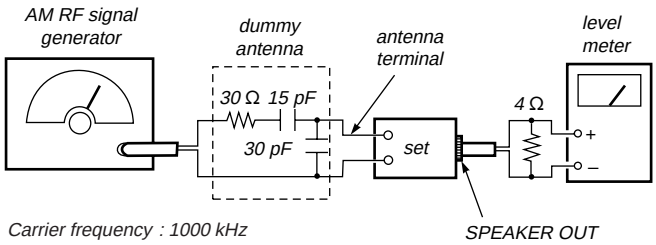
Adjust for a maximum reading on level meter.
IFT1, 3
1,400 kHz

Adjustment Location: See page 17.

AM Auto Scan/Stop Level Adjustment

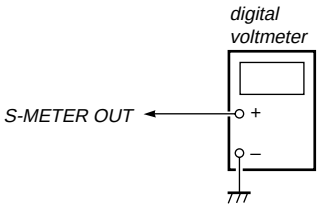
Setting:

SOURCE → MODE button : AM
D-BASS switch : OFF
Frequency Select switch (E model) : AM 10K



Carrier frequency : 1000 kHz
30% amplitude modulation by 1 kHz signal
output level : 33 dB (44.7 µV)

SPEAKER OUT



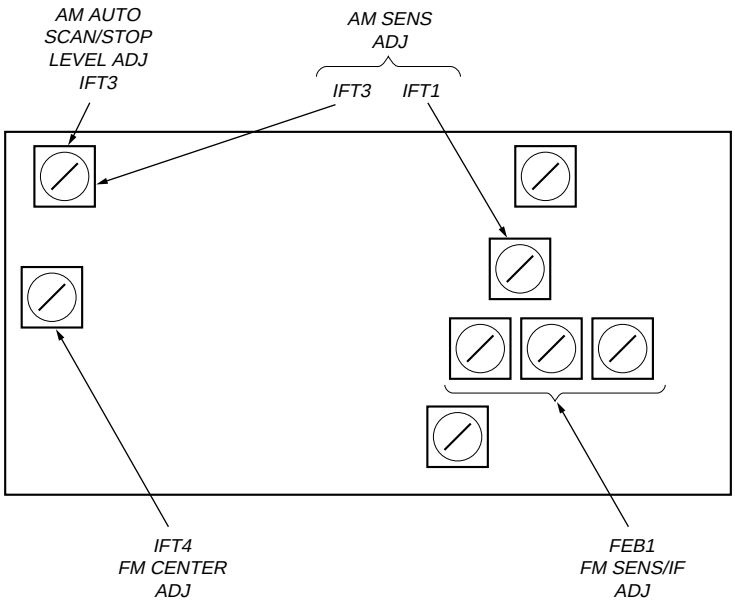
Procedure:

1. Adjust IFT3 on TU01 so that the reading on the digital voltmeter is 1.5 ± 0.2 V.

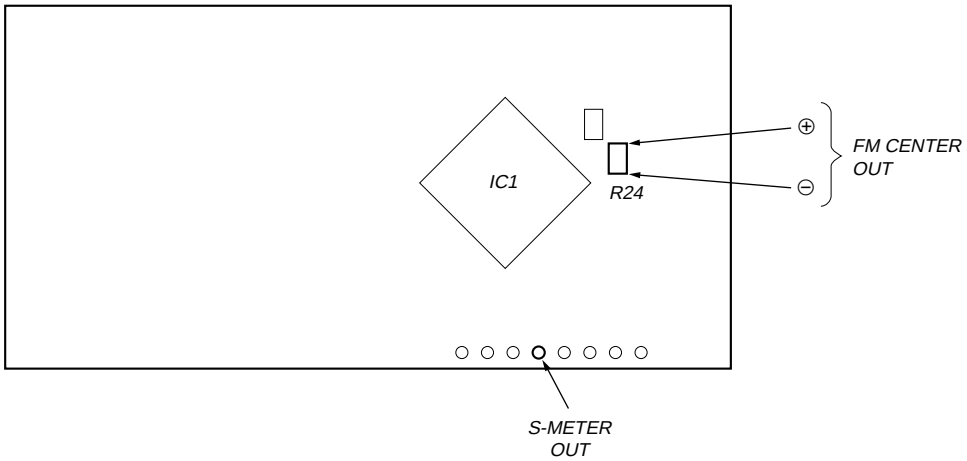
Adjustment Location: tuner unit (TU01)

Adjustment Location: tuner unit (TU01)

– tuner unit (TU01) (component side) –



– tuner unit (TU01) (conductor side) –

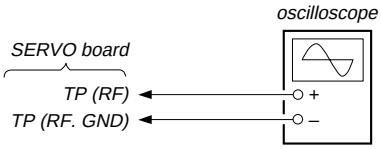


CD SECTION

Note:
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10 MΩ impedance.
4. Clean an objective lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

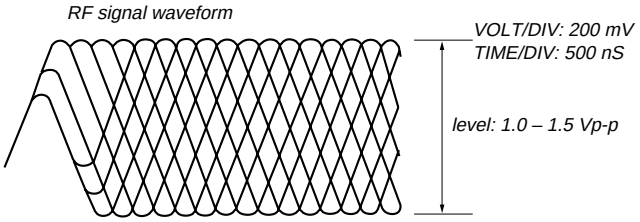
Focus Bias Adjustment

Setting: This adjustment is performed with the set placed horizontally.



Procedure:
1. Connect an oscilloscope between TP (RF) and TP (RF. GND) on the SERVO board.
2. Connect the power supply.
3. Push the RESET button (S881) on the DISPLAY board.
4. Insert the disc (YEDS-18) and playback.
5. Adjust RV1 so that the oscilloscope waveform is clear and check RF signal level is correct or not.

Note: Clear RF signal waveform means that the sharp "◇" can be clearly distinguished at the center of the waveform.



- When observing the eye pattern, set the oscilloscope to AC range and raise the vertical sensitivity so that it may be easily seen.

Adjustment Location: servo board

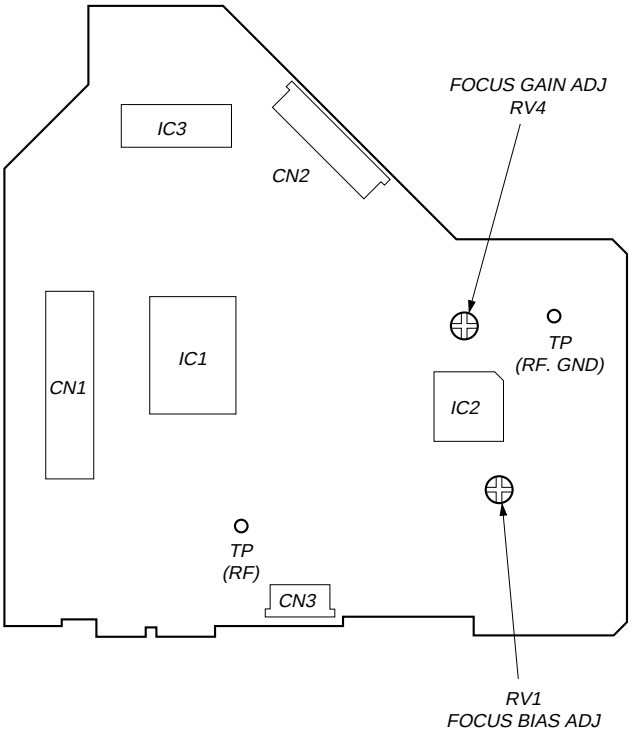
Focus Gain Adjustment (Coarse adjustment)

This adjustment is not required unless the following parts are replaced:
- Optical pick-up
- RV4

Procedure:
1. Set RV4 to the standard position. (mechanical center)
2. Check whether operation noise (while noise type) caused by the 2-axis device (lens section of the optical pick-up) is abnormally loud.
   If the operation noise is too loud, turn RV4 slightly counter-clockwise.
- If the gain is too low:
  Focus does not function and no music is selected.
- If the gain is too high:
  Noise caused by scratches and dust is heard and the operation becomes unstable.

Adjustment Location: servo board

Adjustment Location: servo board (component side)



SECTION 4
DIAGRAMS

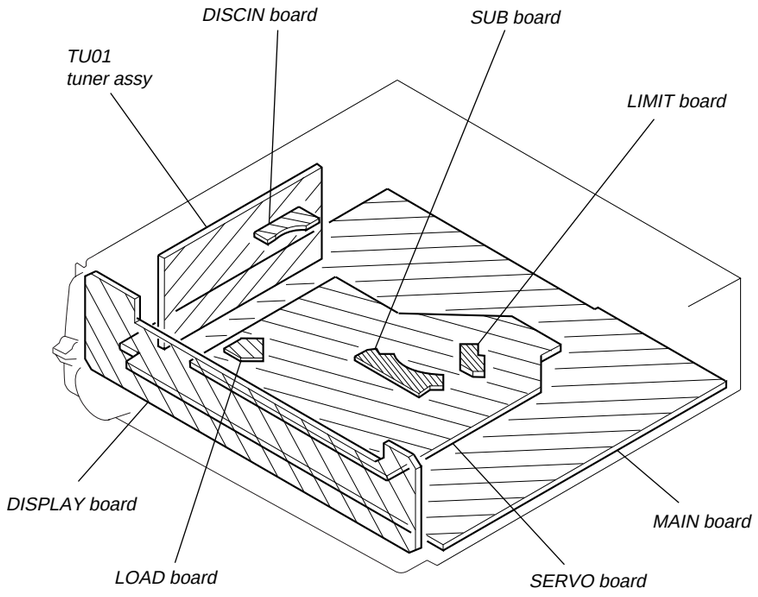
4-1. IC PIN DESCRIPTION

• IC801 µPD17705GC-537-3B9 (SYSTEM CONTROL)

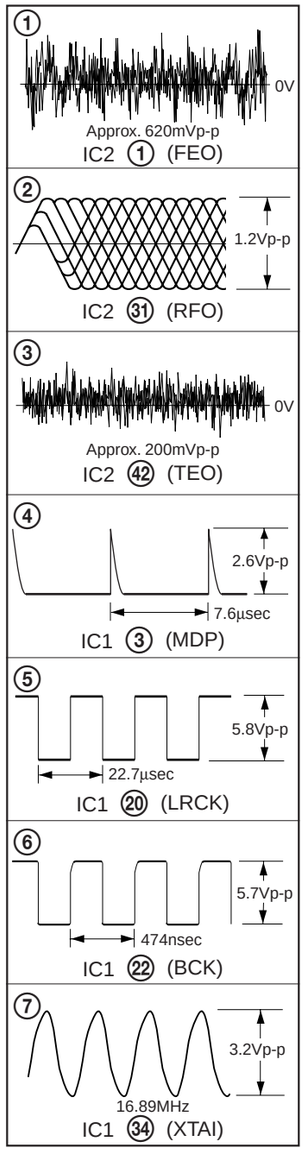
Pin No.	Pin Name	I/O	Pin Description
1	SIRCS	I	SIRCS input (A/D)
2	$\overline{\text{IN-SW}}$	I	CD mechanism position detection
3	$\overline{\text{D-SW}}$	I	CD mechanism position detection
4	$\overline{\text{SELF-SW}}$	I	CD mechanism position detection
5	$\overline{\text{L-SW}}$	I	LIMIT switch
6	LM-EJ	O	Loading motor control (Eject direction)
7	LM-LOD	O	Loading motor control (Loading direction)
8	AMP/ANT-ON	O	Power control for amplifier.
9	MONO	O	Force MONO output
10	SD	I	SD signal input
11	BAND-SW	I	Initialize switch input terminal
12	AREA1-SW	I	Initialize switch input terminal
13	AREA2-SW	I	Initialize switch input terminal
14, 15	RE1, 2	I	Rotary encoder input 1, 2
16	$\overline{\text{SEEK}}$	O	SEEK output
17	$\overline{\text{CD-ON}}$	I/O	Servo drive power
18	$\overline{\text{FM-ON}}$	I/O	FM select output
19	$\overline{\text{TU-ON}}$	I/O	AM select output
20	NC	—	Not used.
21	GND3	—	Ground
22	KEYIN3	I	Not used (Connect to ground)
23, 24	KEYIN2, 1	I	A/D key input 2, 1
25	ROT-IN	I	Rotary commander input
26	S-METER	I	FM and AM common signal meter A/D conversion input
27	$\overline{\text{TEST-SW}}$	I	TEST mode select input
28	AM-IFC	I	AM center frequency input
29	FM-IFC	I	FM center frequency input
30	VDD2	—	Power supply (+5 V)
31	VCOH-FM	I	Local oscillation frequency input (FM)
32	VCOL-AM	I	Local oscillation frequency input (AM)
33	GND2	—	Ground
34	NC	—	Not used.
35	EO1-PDOUT	O	Error out output
36	TESTO	—	Connect to ground
37	AM-ON(TU-ON)	O	AM power output (AM select)
38	FM-ON(FM/$\overline{\text{AM}}$)	O	FM power output (FM select)
39	LCL/$\overline{\text{DX}}$	O	LOCAL/$\overline{\text{DX}}$ select (“H” : LOCAL, “L” : DX)
40	BEEP	O	BEEP output
41	$\overline{\text{ACC-IN}}$	I	Accessory input
42	SCOR	I	SUBQ data read request
43	MUTE	O	System mute output
44	$\overline{\text{AMP-MUTE}}$	O	Power amplifier mute output
45	TEL-MUTE	O	Telephone mute output
46	NC	—	Fixed at “H” in this set.
47	VOL-CE	O	Electric volume chip select
48	VOL-CLK	O	Electric volume serial clock
49	VOL-DATA	O	Electric volume serial data
50	EMPHO	O	De-emphasis control output
51	PW-ON	O	System power control
52	MD-ON	O	Loading motor power
53	CD-ON	O	Servo drive power

Pin No.	Pin Name	I/O	Pin Description
54	ILL-ON	O	Illumination output
55	C.ALARM	I	Caution alarm select input (Used/Not used)
56	NC	I	Not used (Connect to ground)
57	NC	—	Fixed at “H” in this set.
58	LCD-CE	O	LCD drive chip select output
59	EZ-SEL	I	SHIFT + input
60	SENS	I	Information input from servo IC.
61	FOK	I	Focus OK input
62	$\overline{\text{LD-ON}}$	O	Laser diode control
63	NC	—	Not used. (Connect to ground)
64	[IN] ST/MONO [OUT] $\overline{\text{MONO}}$	I/O	Used for both STEREO indicator display input and force MONO output. (FM)
65	LCD-CKO	O	LCD driver serial clock output
66	LCD-So	O	LCD driver serial data output
67	$\overline{\text{INH}}$	O	INHbit output
68	SQ-CKo	O	Q data read serial clock output
69	CD-RST	O	Servo IC/DAC reset output
70	SQ-SI	I	Q data input
71	CD-SO	O	Serial data output to servo IC.
72	CD-LAT	O	Data latch output to servo IC.
73	CD-CKO	O	Serial clock output to servo IC.
74	VREF	—	Not used.
75	GND1	—	Ground
76	X-OUT	—	Crystal oscillator connection (4.5 MHz)
77	X-IN	I	Crystal oscillator connection (4.5 MHz)
78	BU-IN	I	Back-up detection
79	VDD1	—	Power supply (+5 V)
80	$\overline{\text{RESET}}$	I	RESET input

4-2. CIRCUIT BOARDS LOCATION



• **Waveforms** (MODE:PLAY)



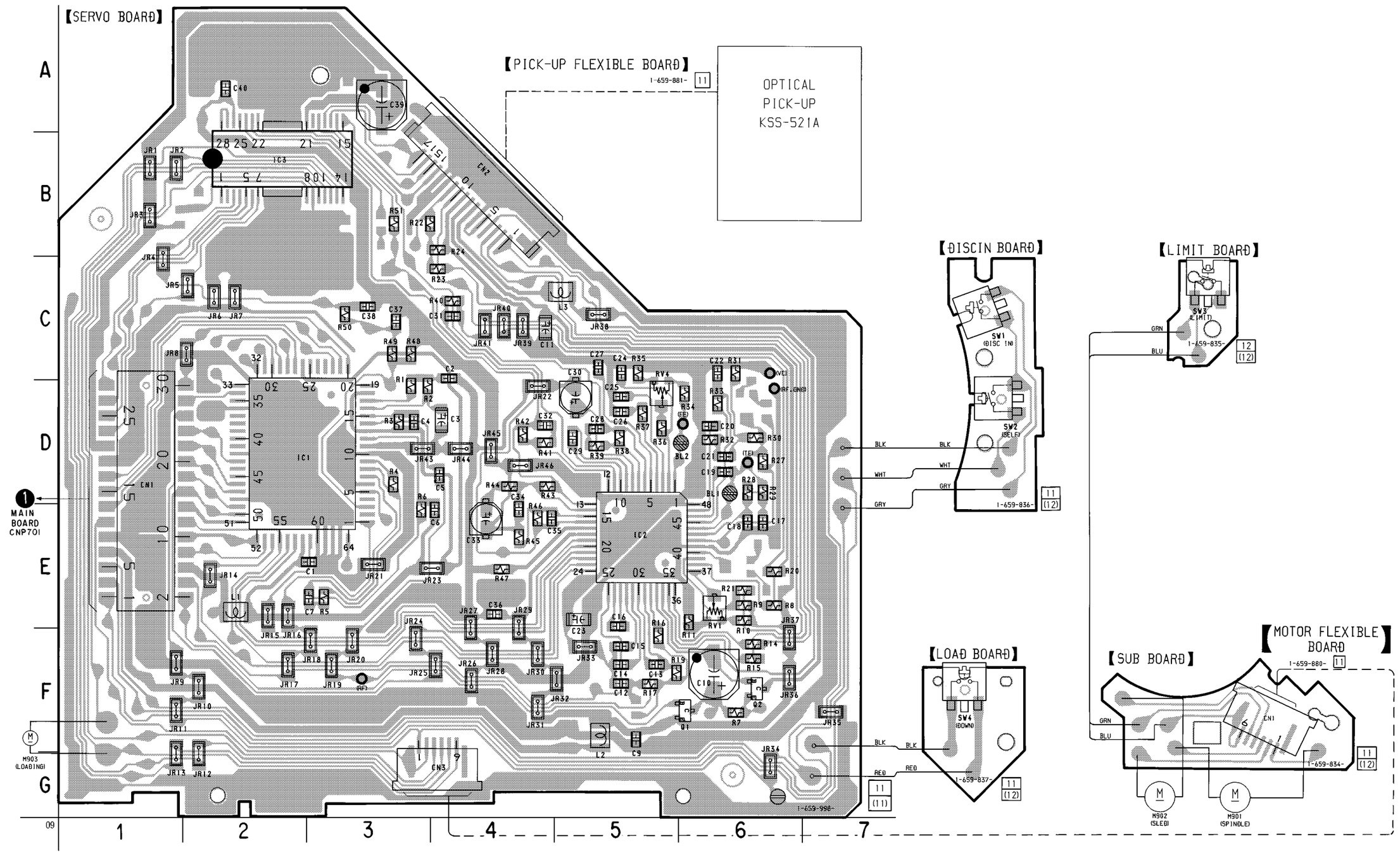
Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- ▭ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
  ＊ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

4-3. PRINTED WIRING BOARDS — CD MECHANISM SECTION —

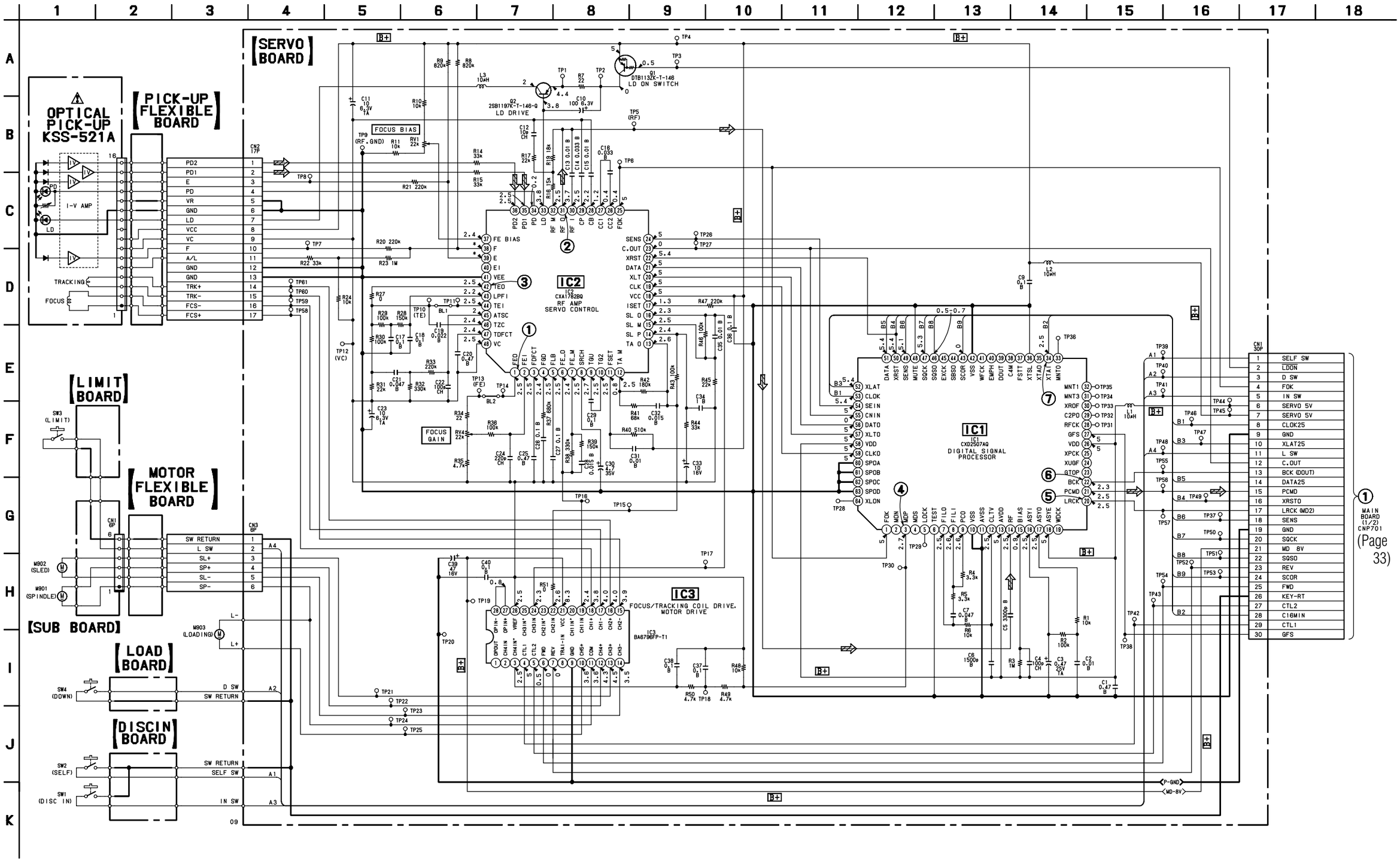


• **Semiconductor Location**

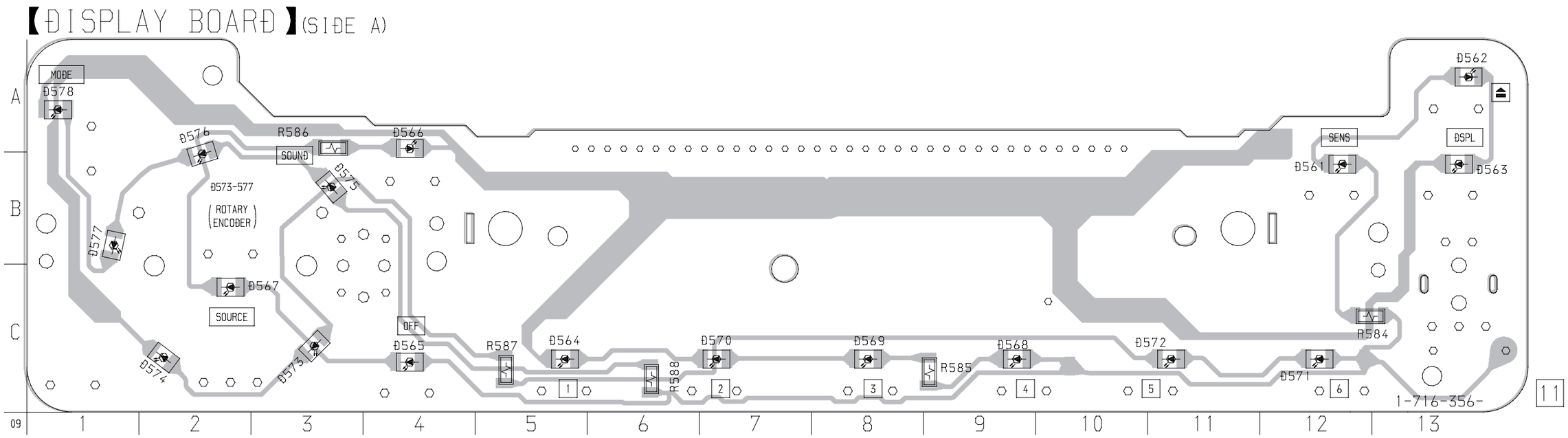
Ref. No.	Location
IC1	D-2
IC2	E-5
IC3	B-2
Q1	F-6
Q2	F-6

Note:
- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▒▒▒ : Pattern from the side which enables seeing.

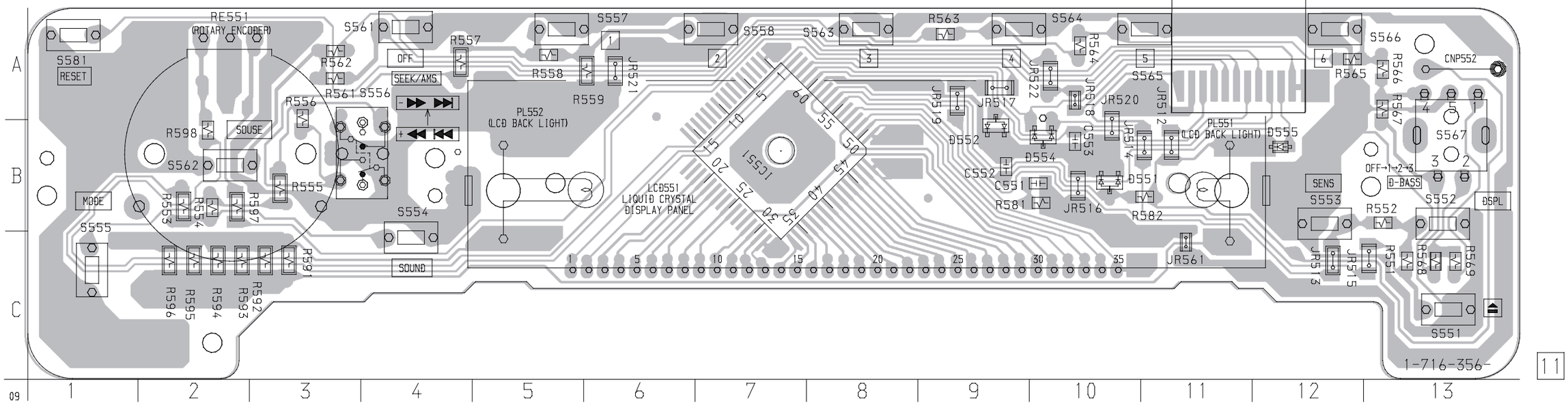
4-4. SCHEMATIC DIAGRAM — CD MECHANISM SECTION — • Refer to page 22 for Waveforms and Note and page 37 for IC Block Diagrams.



4-5. PRINTED WIRING BOARD — DISPLAY SECTION —



MAIN BOARD
CNP801
2



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
(D551)	B-10	D566	A-4	D574	C-2
(D552)	B-9	D567	C-2	D575	B-3
(D554)	B-10	D568	C-9	D576	A-2
D561	B-12	D569	C-8	D577	B-1
D562	A-13	D570	C-7	D578	A-1
D563	B-13	D571	C-12		
D564	C-5	D572	C-11	(IC551)	B-7
D565	C-4	D573	C-3		

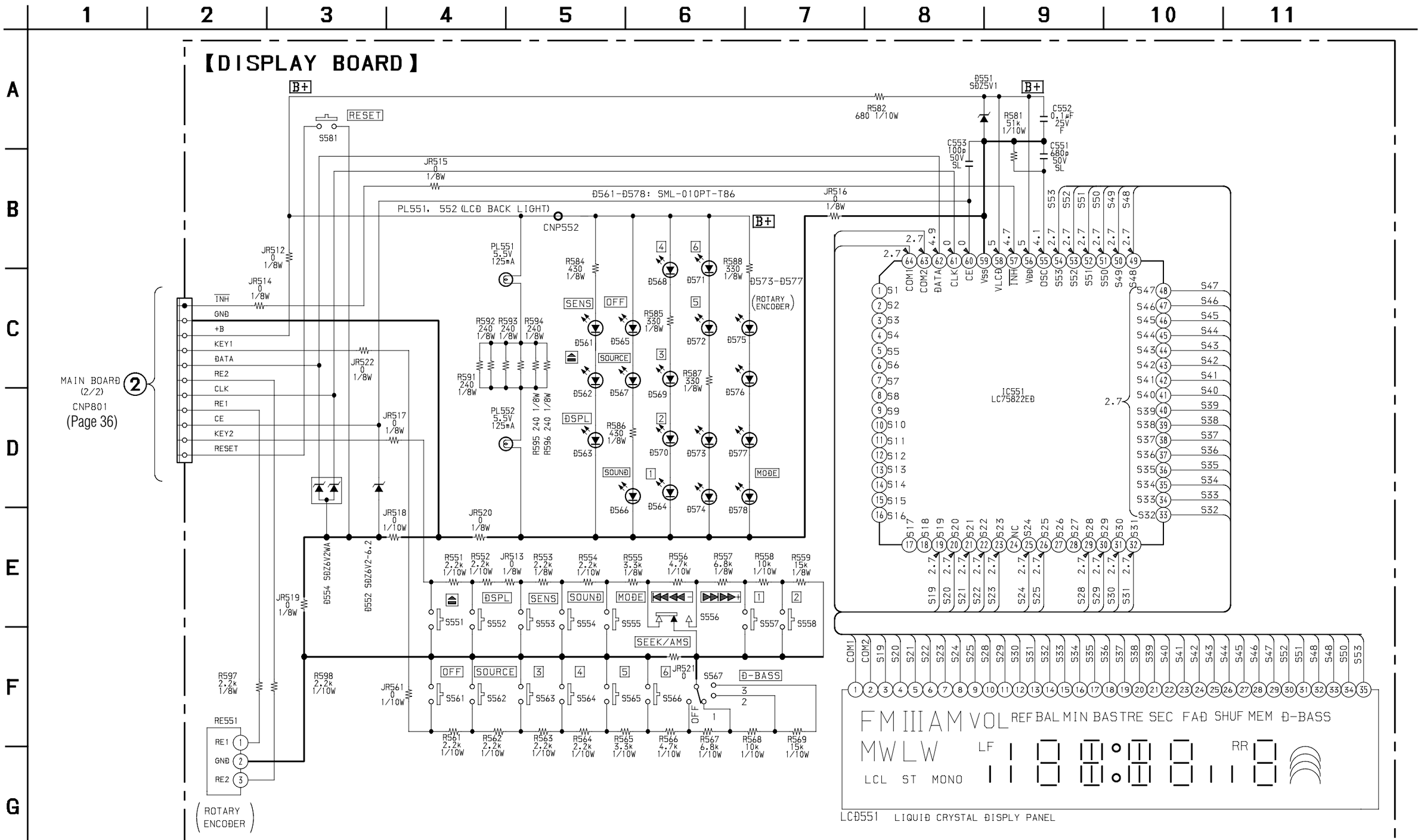
( ) : SIDE B

Note:

- ○ : Through hole.
- ▒▒ : Pattern from the side which enables seeing. (The other layer's patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

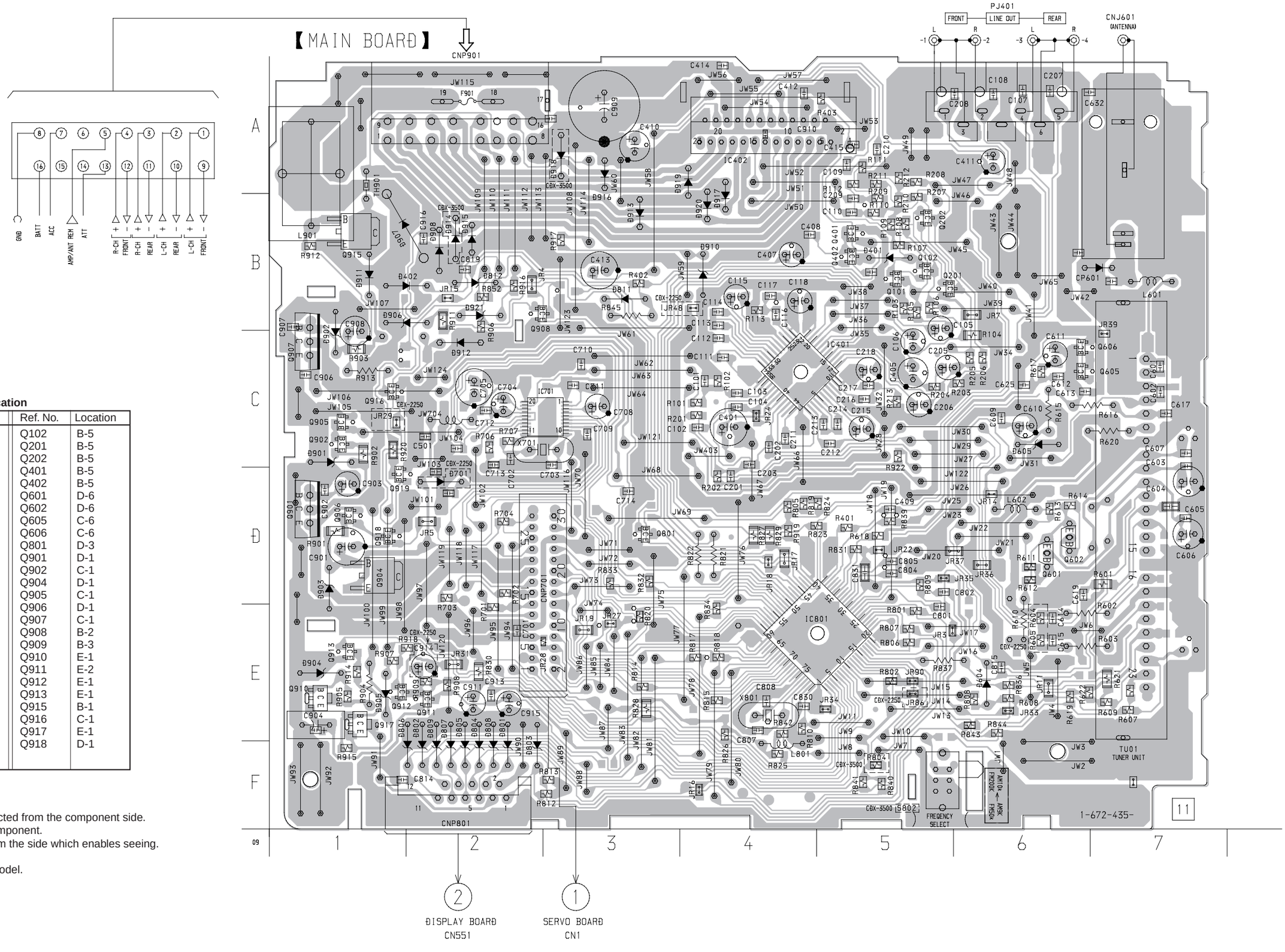
4-6. SCHEMATIC DIAGRAM — DISPLAY SECTION —



Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- ▭ : panel designation.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.

4-7. PRINTED WIRING BOARD — MAIN SECTION —



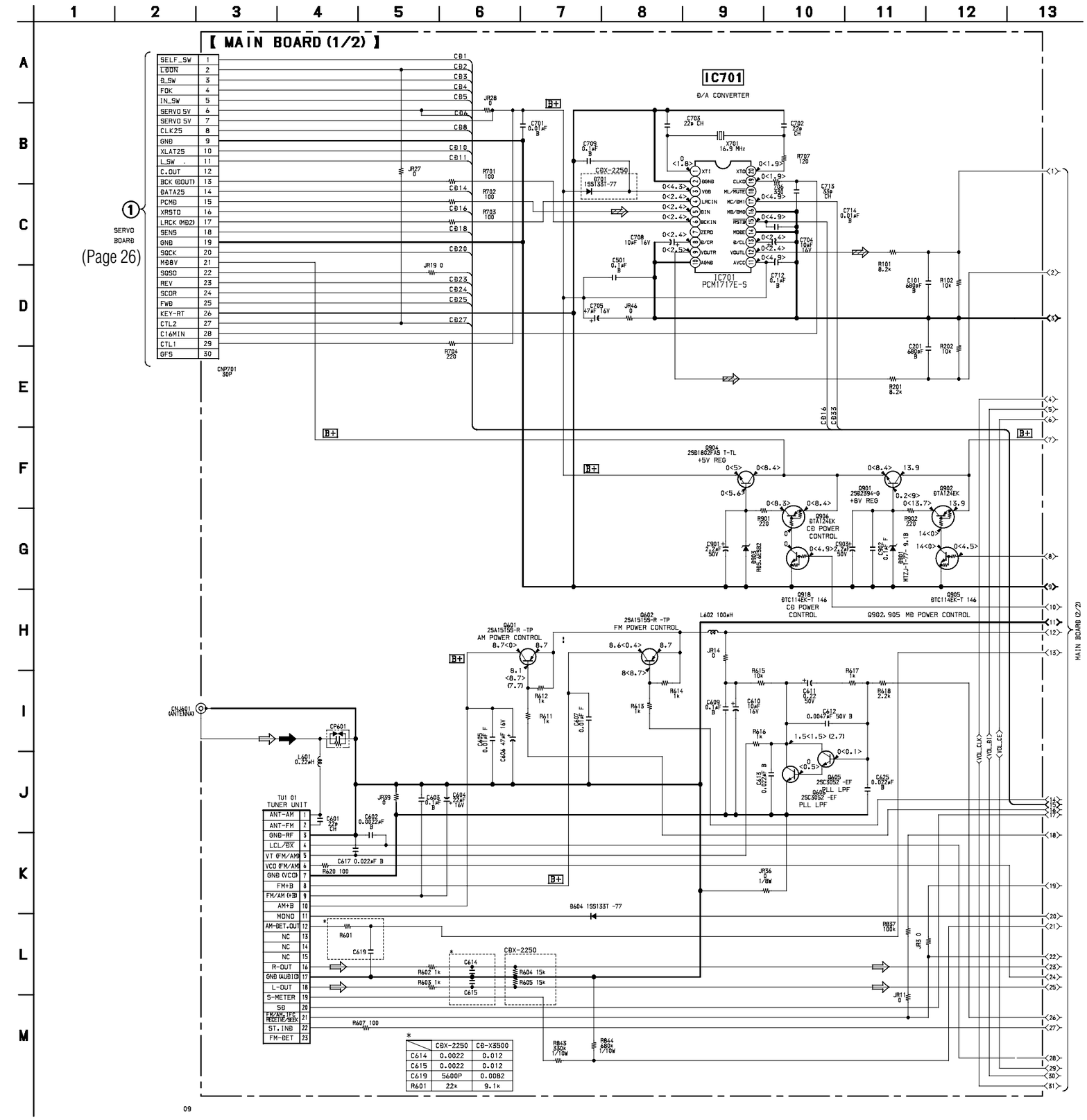
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D401	B-5	Q102	B-5
D402	B-1	Q201	B-5
D604	E-6	Q202	B-5
D701	D-2	Q401	B-5
D811	B-3	Q402	B-5
D812	B-2	Q601	D-6
D901	C-1	Q602	D-6
D902	B-1	Q605	C-6
D903	D-1	Q606	C-6
D904	E-1	Q801	D-3
D905	E-1	Q901	D-1
D906	B-1	Q902	C-1
D907	B-1	Q904	D-1
D908	B-2	Q905	C-1
D910	B-4	Q906	D-1
D911	B-1	Q907	C-1
D914	B-2	Q908	B-2
D916	A-3	Q909	B-3
D917	B-4	Q910	E-1
D918	A-3	Q911	E-2
		Q912	E-1
IC401	C-4	Q913	E-1
IC402	A-4	Q915	B-1
IC701	C-2	Q916	C-1
IC801	E-4	Q917	E-1
		Q918	D-1
Q101	B-5		

Note:

- ⟜——⟝ : parts extracted from the component side.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.
- Abbreviation
  CND : Canadian model.

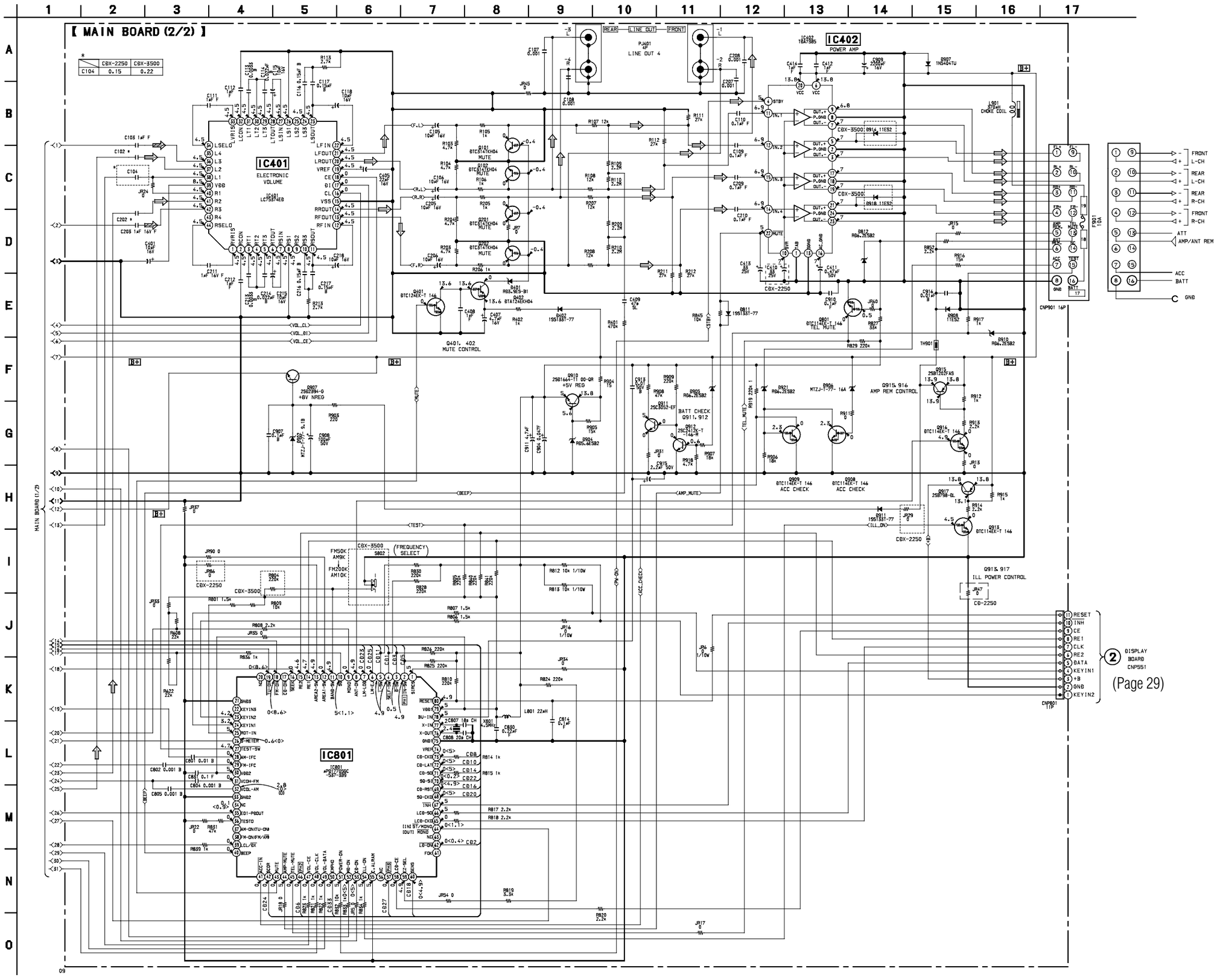
4-8. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) —



Note:

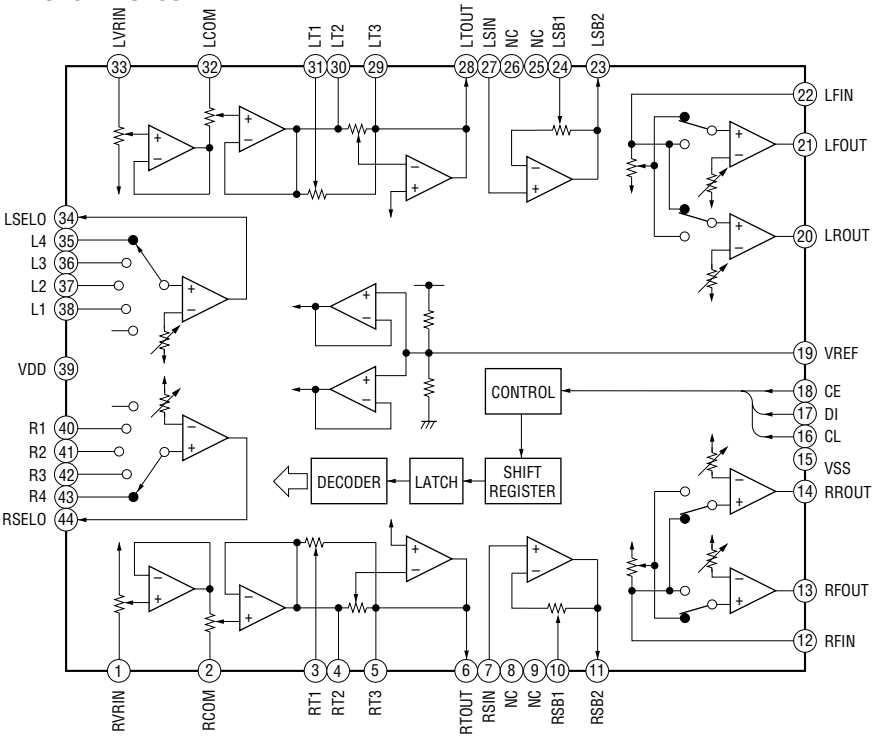
- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltage is dc with respect to ground under no-signal (detuned) condition.
  no mark : FM
  ( ) : AM
  < > : CD PLAY
  ∗ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ➡ : AM
  ⇛ : CD
- Abbreviation
  CND : Canadian model.

4-8. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) — • Refer to page 37 for IC Block Diagrams.

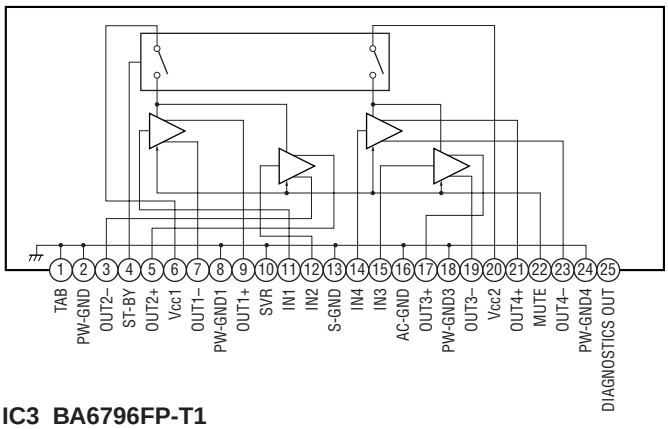


• **IC Block Diagrams**

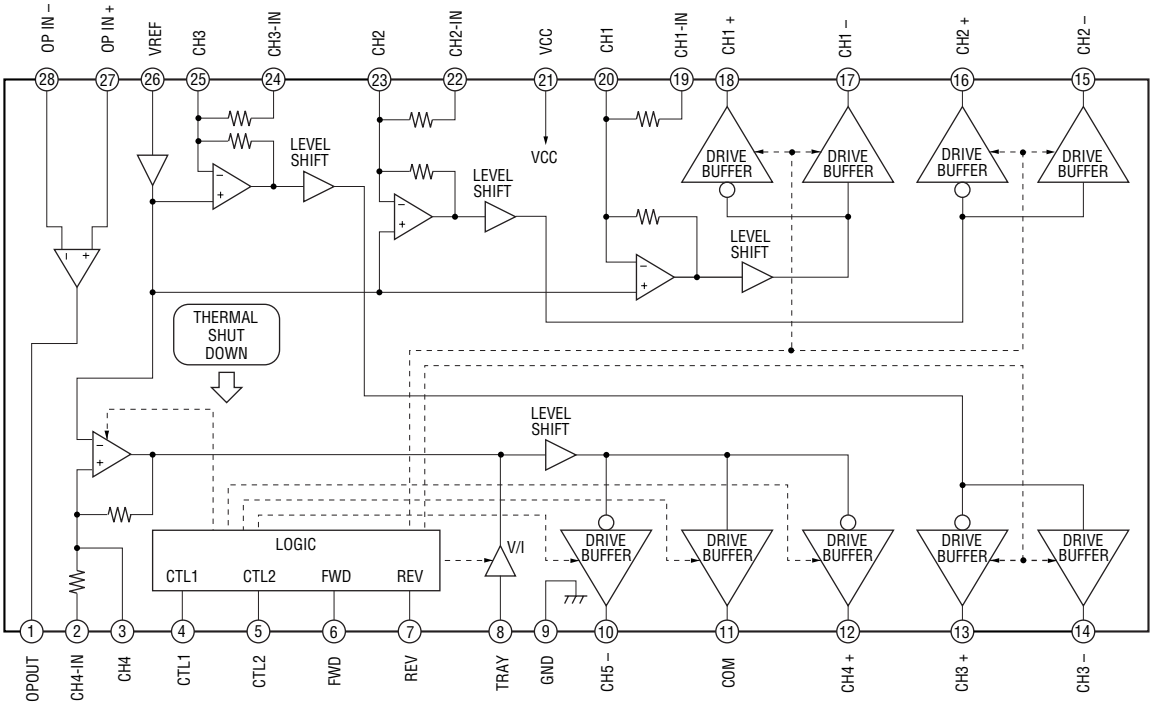
IC401 LC75374E



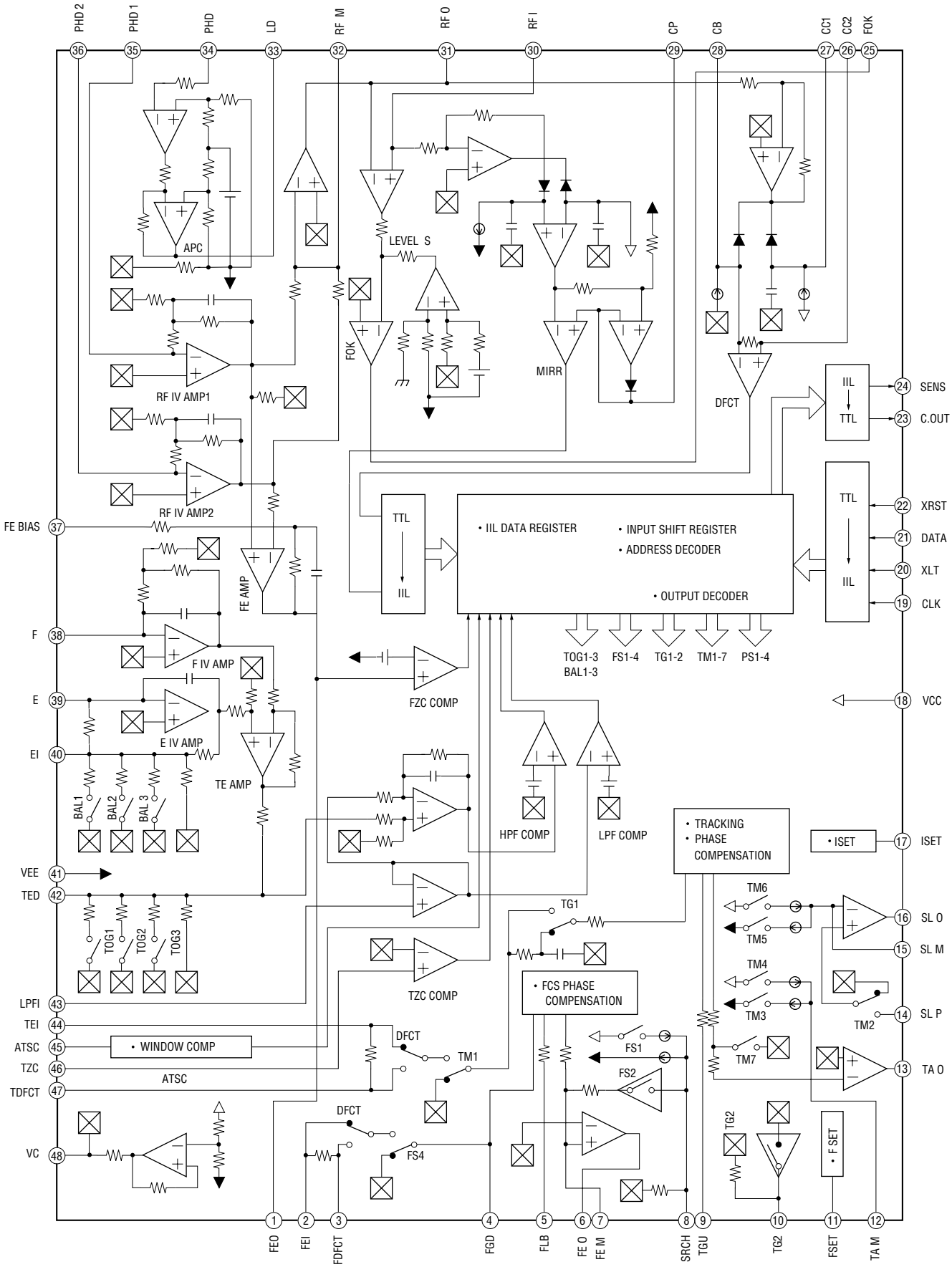
IC402 TDA7385



IC3 BA6796FP-T1



IC2 CXA1782BQ



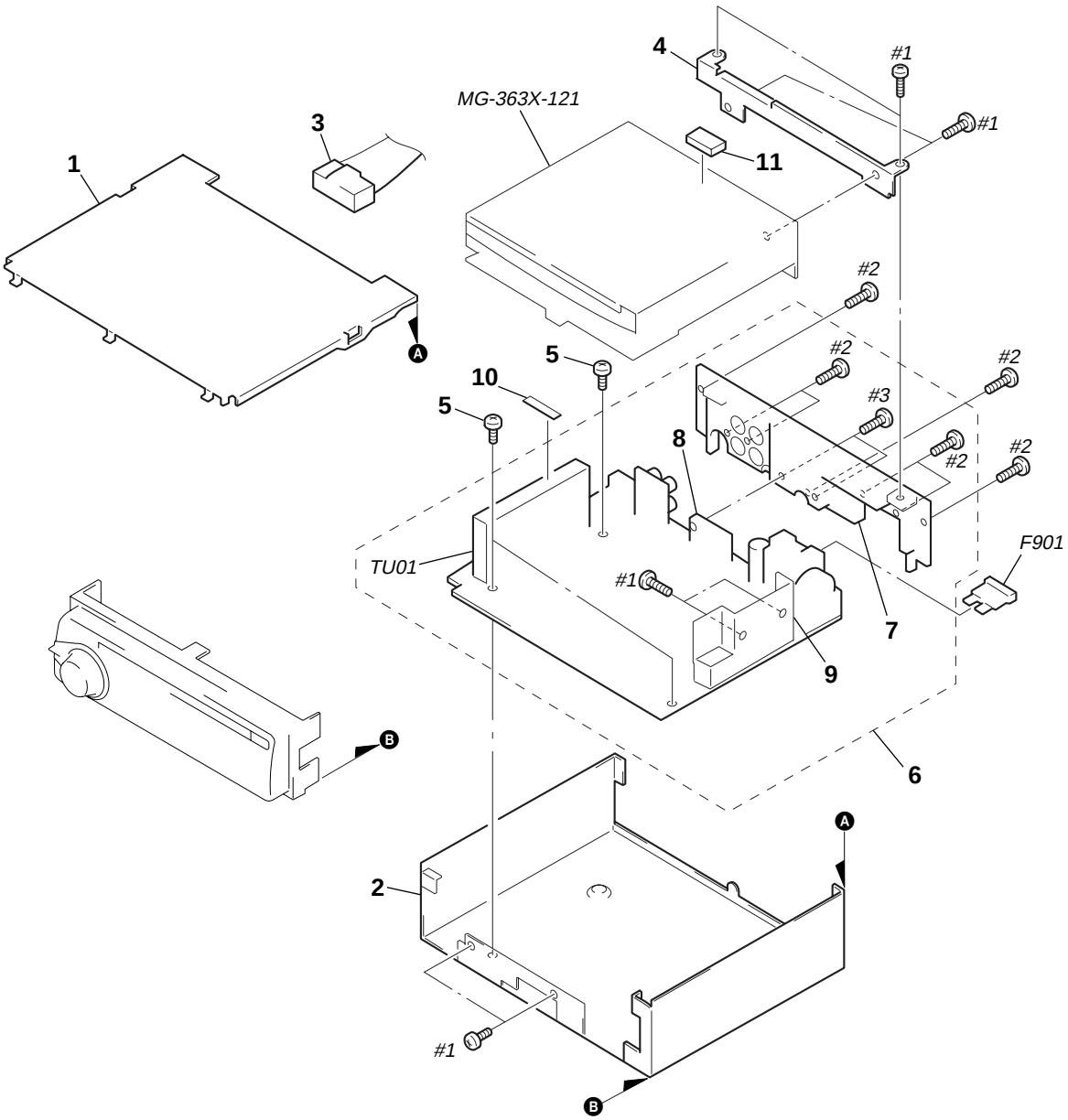
SECTION 5
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . . (RED)
  ↑ ↑
  Parts color Cabinets color
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

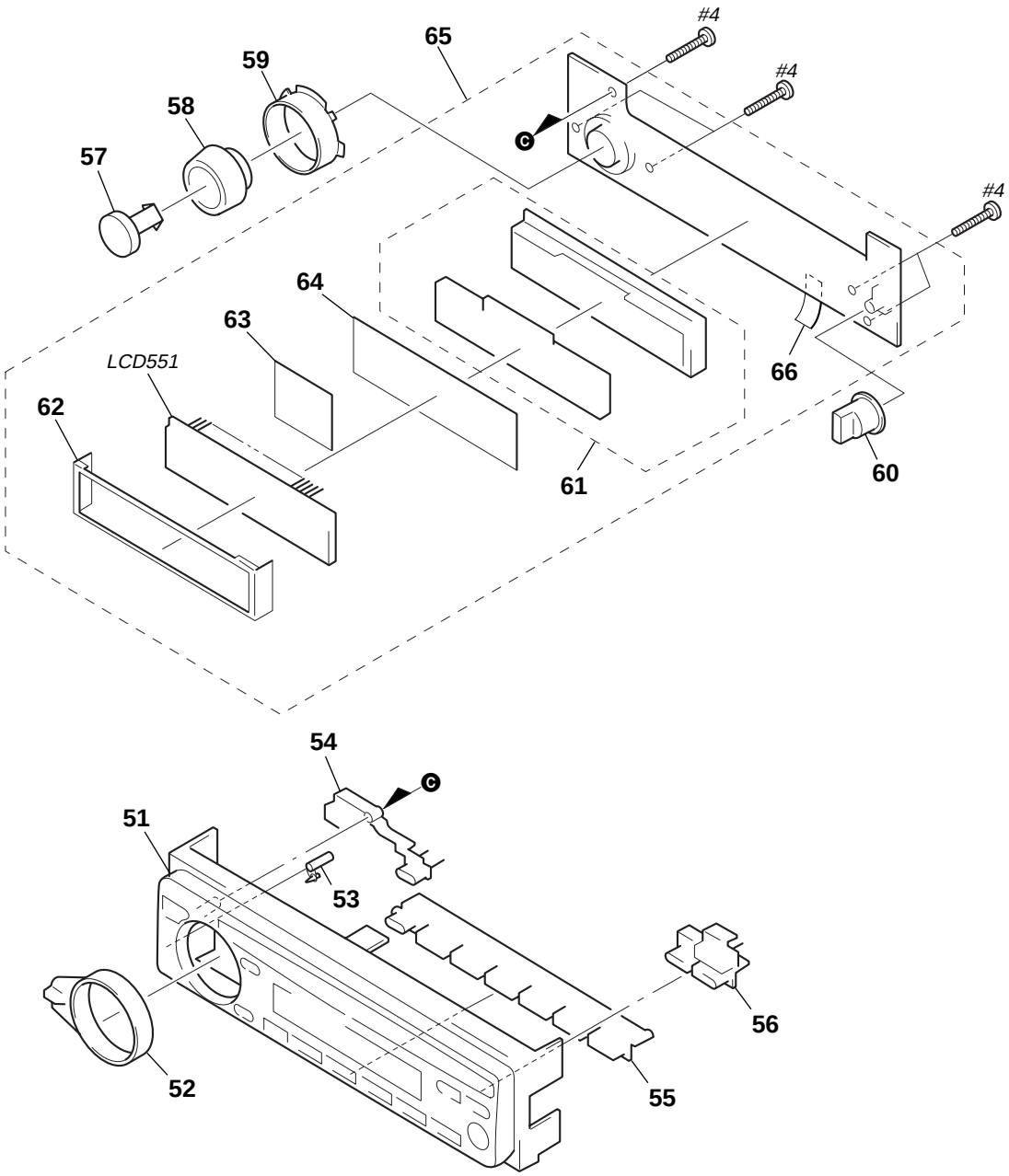
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

5-1. CHASSIS SECTION



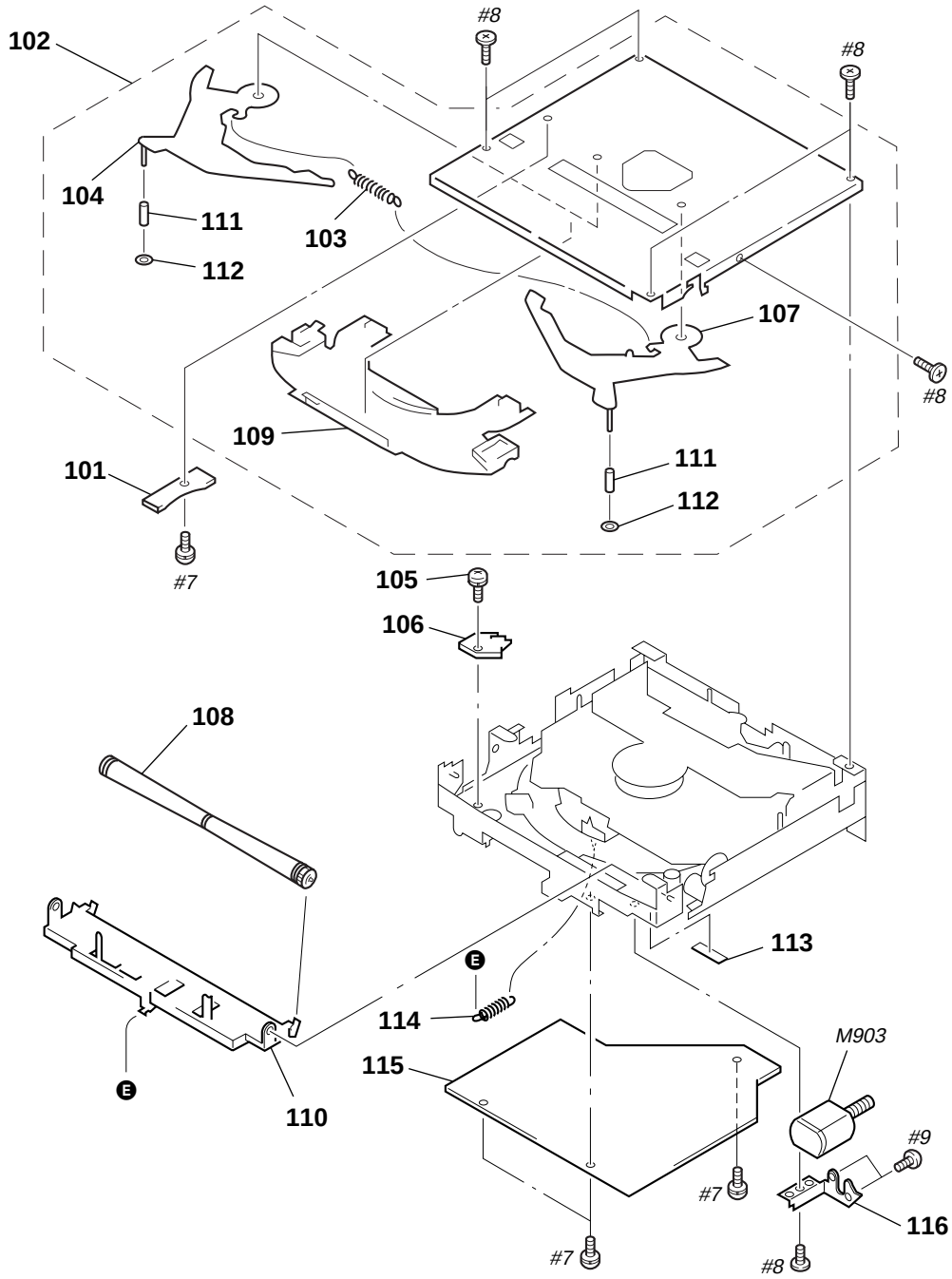
Ref. No.	Part No.	Description	Remark
* 1	3-030-925-01	COVER	
* 2	3-030-876-01	CHASSIS	
3	1-769-786-81	CORD (WITH CONNECTOR) (POWER)	
* 4	3-030-927-01	BRACKET (MD)	
5	3-922-535-11	SCREW (+BTT)	
* 6	A-3294-553-A	MAIN BOARD, COMPLETE (CDX-2250)	
* 6	A-3294-635-A	MAIN BOARD, COMPLETE (CDX-3500)	
* 7	3-030-849-01	HEAT SINK (T)	
* 8	3-019-565-01	BRACKET (IC)	
* 9	3-030-850-01	HEAT SINK (REG)	
* 10	3-024-285-01	CUSHION (RUBBER)	
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A	
TU01	A-3301-697-A	TUNER ASSY	

5-2. FRONT PANEL SECTION



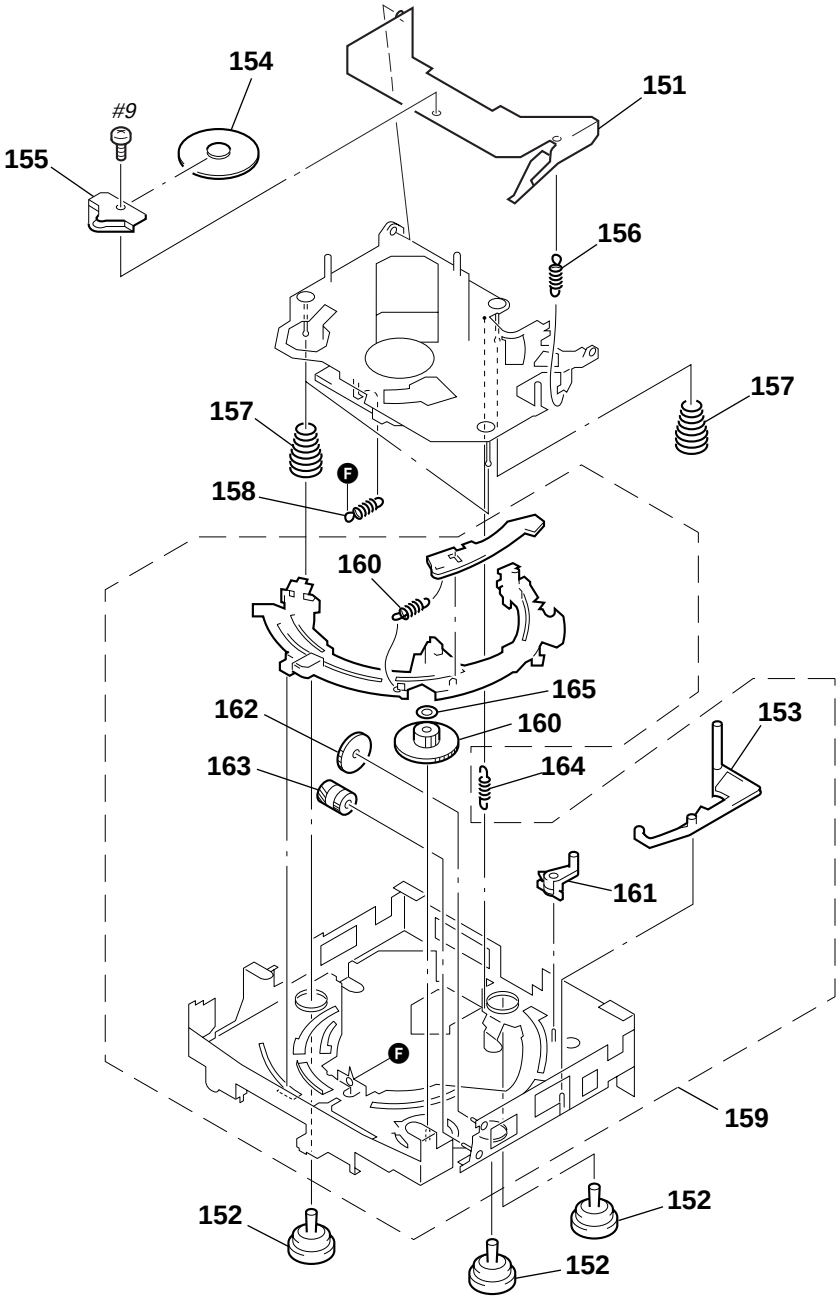
Ref. No.	Part No.	Description	Remark
51	X-3376-779-1	PANEL (S) ASSY, FRONT (CDX-2250)	
51	X-3377-101-1	PANEL (S) ASSY, FRONT (CDX-3500)	
52	3-019-544-03	KNOB (SEEK/AMS)(CDX-2250)	
52	3-019-544-23	KNOB (SEEK/AMS)(CDX-3500)	
53	3-019-542-01	BUTTON (RESET)	
54	3-019-550-01	BUTTON (MODE/SOUND)	
55	3-019-552-01	BUTTON (1-6)	
56	3-030-873-11	BUTTON (CD EJECT)	
57	3-025-315-02	BUTTON (SOURCE)	
58	3-019-547-01	KNOB (VOL)	
59	3-019-548-01	RING	
60	3-019-543-01	KNOB (D-BASS)	
* 61	X-3376-745-1	HOLDER ASSY, LCD	
* 62	3-019-557-01	PLATE (LCD), GROUND	
* 63	3-019-561-01	SHEET, LCD COLOR	
64	3-019-558-01	SHEET (D) (LCD)	
* 65	A-3294-555-A	DISPLAY BOARD, COMPLETE (CDX-2250)	
66	1-783-268-11	CABLE, FLAT	
LCD551	1-803-439-21	DISPLAY PANEL, LIQUID CRYSTAL	

5-3. CD MECHANISM SECTION (1) (MG-363X-121)



Ref. No.	Part No.	Description	Remark
* 101	1-659-836-11	DISCIN BOARD	
* 102	A-3291-816-B	CHASSIS (T) SUB ASSY	
103	3-931-909-01	SPRING (LR), TENSION	
104	X-3371-501-1	LEVER (L) ASSY	
105	3-338-737-01	SCREW (2X3), + PS	
* 106	1-659-837-11	LOAD BOARD	
107	X-3371-502-1	LEVER (R) ASSY	
108	A-3301-203-A	ROLLER ASSY	
109	3-931-908-01	GUIDE (DISC)	
110	3-931-902-04	ARM (ROLLER)	
111	3-936-756-01	ROLLER (D)	
112	3-321-393-01	WASHER, STOPPER	
* 113	3-939-139-01	SPACER	
114	3-931-916-01	SPRING (RA), TENSION	
* 115	A-3309-227-A	SERVO BOARD, COMPLETE	
* 116	3-007-530-01	BRACKET (MOTOR)	
M903	A-3291-676-A	MOTOR SUB ASSY, LOADING	

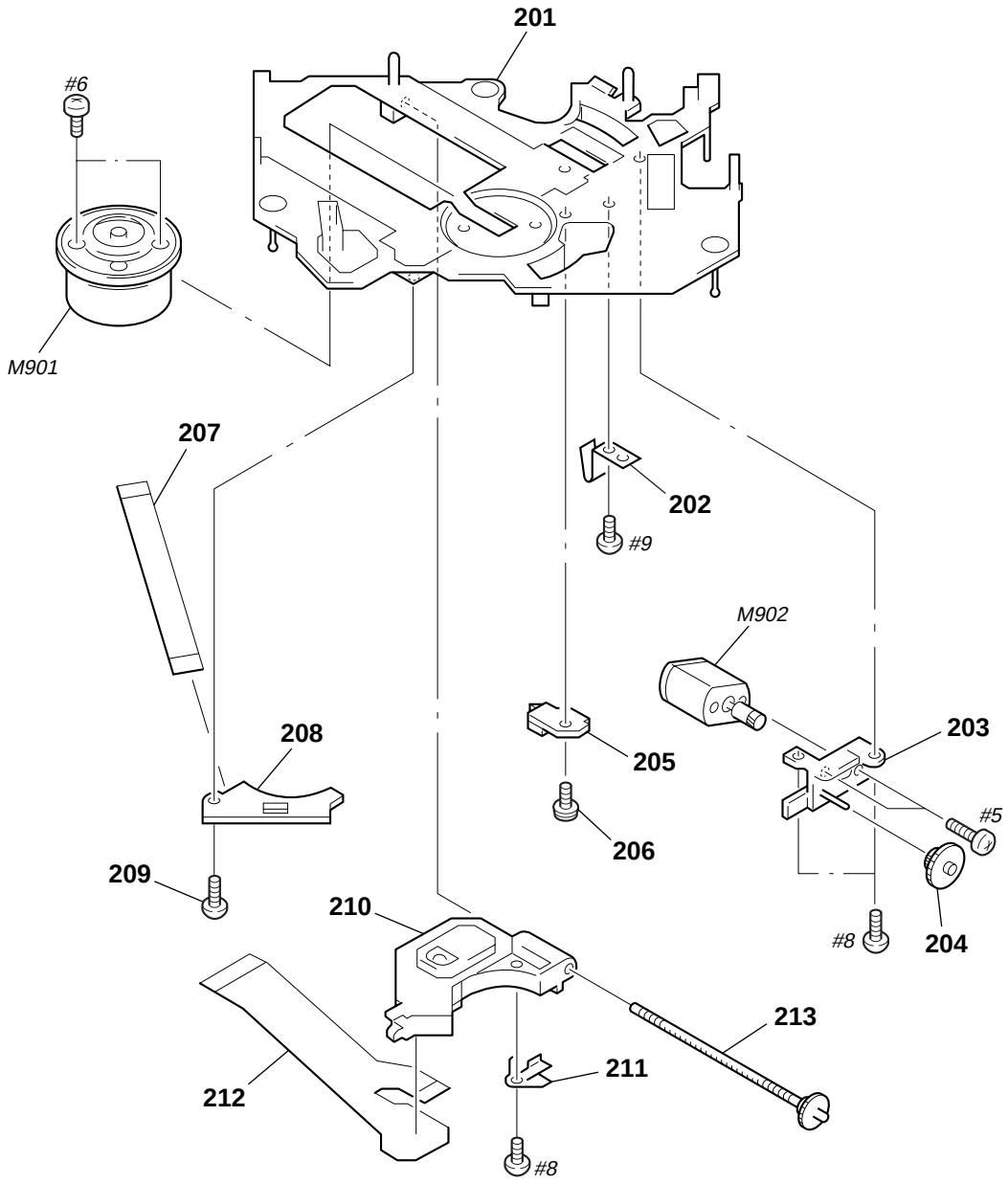
5-4. CD MECHANISM SECTION (2) (MG-363X-121)



Ref. No.	Part No.	Description	Remark
151	3-931-893-01	ARM, CHUCKING	
152	3-931-897-01	DAMPER (T)	
153	3-931-879-02	LEVER (D)	
* 154	3-913-404-11	RETAINER (DISC)	
155	3-931-894-01	BRACKET (CP)	
156	3-931-895-01	SPRING (CH), TENSION	
157	3-931-898-01	SPRING (FL), COMPRESSION	
158	3-032-483-02	SPRING (KF1), TENSION	

Ref. No.	Part No.	Description	Remark
* 159	A-3277-802-C	CHASSIS (M) COMPLETE ASSY	
160	3-014-727-01	WHEEL (LW), WORM	
161	3-931-881-01	LEVER (LOCK)	
162	3-931-882-02	GEAR (MDL)	
163	3-007-537-11	WHEEL (U), WORM	
164	3-032-484-01	SPRING (KR1), TENSION	
165	3-018-272-01	WASHER	

5-5. CD MECHANISM SECTION (3) (MG-363X-121)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 201	X-3374-022-1	CHASSIS (OP) (O/S) ASSY	
202	3-931-829-01	SPRING (SL), PLATE	
203	X-3371-504-1	BASE (DRIVING) ASSY	
204	3-931-832-01	GEAR (SL MIDWAY)	
* 205	1-659-835-12	LIMIT BOARD	
206	3-338-737-01	SCREW (2X3), + PS	
207	1-659-880-11	MOTOR FLEXIBLE BOARD	
* 208	1-659-834-11	SUB BOARD	
209	3-909-607-01	SCREW	
⚠210	8-820-010-06	PICK-UP, OPTICAL KSS-521A/Q-NP	
211	3-931-834-01	SPRING (FEED), PLATE	
212	1-659-881-11	PICKUP FLEXIBLE BOARD	
213	A-3291-669-A	SHAFT (FEED) ASSY	
M901	X-3371-664-2	MOTOR ASSY (SPINDLE)	
M902	A-3291-674-A	MOTOR ASSY, SLED	

DISCIN **DISPLAY**

SECTION 6
ELECTRICAL PARTS LIST

Note:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: µ , for example:
  uA...: µ A..., uPA...: µ PA..., uPB...: µ PB..., uPC...: µ PC..., uPD...: µ PD...
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H
- Abbreviation
  CND : Canadian model

Ref. No.	Part No.	Description			Remark
*	1-659-836-11	DISCIN BOARD			
		**********			
		< SWITCH >			
SW1	1-572-288-21	SWITCH, PUSH			
SW2	1-572-288-21	SWITCH, PUSH			
**********					
*	A-3294-555-A	DISPLAY BOARD, COMPLETE (CDX-2250)			
		**********			
*	A-3294-636-A	DISPLAY BOARD, COMPLETE (CDX-3500)			
		**********			
	3-019-558-01	SHEET (D) (LCD)			
*	3-019-557-01	PLATE (LCD), GROUND			
*	3-019-561-01	SHEET, LCD COLOR			
*	X-3376-745-1	HOLDER ASSY, LCD			
		< CAPACITOR >			
C551	1-163-137-00	CERAMIC CHIP	680PF	5% 50V	
C552	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C553	1-163-117-00	CERAMIC CHIP	100PF	5% 50V	
		< CONNECTOR >			
* CNP552	1-779-130-11	PIN, CONNECTOR 1P			
		< DIODE >			
D551	8-719-073-15	DIODE SDZ5V1			
D552	8-719-067-70	DIODE SDZ6V2-6.2			
D554	8-719-068-68	DIODE SDZ6V2WA			
D561	8-719-067-77	DIODE SML-010PT-T86 (SENS)			
D562	8-719-067-77	DIODE SML-010PT-T86 (DSPL)			
D563	8-719-067-77	DIODE SML-010PT-T86 (⏏)			
D564	8-719-067-77	DIODE SML-010PT-T86 (1)			
D565	8-719-067-77	DIODE SML-010PT-T86 (OFF)			
D566	8-719-067-77	DIODE SML-010PT-T86 (SOUND)			
D567	8-719-067-77	DIODE SML-010PT-T86 (SOURCE)			
D568	8-719-067-77	DIODE SML-010PT-T86 (4)			
D569	8-719-067-77	DIODE SML-010PT-T86 (3)			
D570	8-719-067-77	DIODE SML-010PT-T86 (2)			
D571	8-719-067-77	DIODE SML-010PT-T86 (6)			
D572	8-719-067-77	DIODE SML-010PT-T86 (5)			
D573	8-719-067-77	DIODE SML-010PT-T86			
D574	8-719-067-77	DIODE SML-010PT-T86			
D575	8-719-067-77	DIODE SML-010PT-T86			
D576	8-719-067-77	DIODE SML-010PT-T86			
D577	8-719-067-77	DIODE SML-010PT-T86			
D578	8-719-067-77	DIODE SML-010PT-T86 (MODE)			
		< IC >			
IC551	8-759-369-90	IC LC75822ED			
		< JUMPER RESISTOR >			
JR512	1-216-296-00	SHORT	0		
JR513	1-216-296-00	SHORT	0		
JR514	1-216-296-00	SHORT	0		
JR515	1-216-296-00	SHORT	0		
JR516	1-216-296-00	SHORT	0		
JR517	1-216-296-00	SHORT	0		
JR518	1-216-295-00	SHORT	0		
JR519	1-216-296-00	SHORT	0		
JR520	1-216-296-00	SHORT	0		
JR521	1-216-296-00	SHORT	0		
JR522	1-216-296-00	SHORT	0		
JR561	1-216-295-00	SHORT	0		
		< LIQUID CRYSTAL DISPLAY >			
LCD551	1-803-439-21	DISPLAY PANEL, LIQUID CRYSTAL			
		< PILOT LAMP >			
PL551	1-517-665-21	LAMP PILOT			
PL552	1-517-665-21	LAMP PILOT			
		< RESISTOR >			
R551	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	
R552	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	
R553	1-216-206-00	RES,CHIP	2.2K	5% 1/8W	
R554	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	
R555	1-216-210-00	RES,CHIP	3.3K	5% 1/8W	
R556	1-216-065-00	RES,CHIP	4.7K	5% 1/10W	
R557	1-216-218-00	RES,CHIP	6.8K	5% 1/8W	
R558	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R559	1-216-226-00	RES,CHIP	15K	5% 1/8W	
R561	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	
R562	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	
R563	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	
R564	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	
R565	1-216-061-00	METAL CHIP	3.3K	5% 1/10W	
R566	1-216-065-00	RES,CHIP	4.7K	5% 1/10W	
R567	1-216-069-00	METAL CHIP	6.8K	5% 1/10W	

Ref. No.	Part No.	Description			Remark
R568	1-216-073-00	METAL CHIP	10K	5%	1/10W
R569	1-216-077-00	METAL CHIP	15K	5%	1/10W
R581	1-216-090-00	METAL CHIP	51K	5%	1/10W
R582	1-216-045-00	METAL CHIP	680	5%	1/10W
R584	1-216-189-00	RES,CHIP	430	5%	1/8W
R585	1-216-186-00	RES,CHIP	330	5%	1/8W
R586	1-216-189-00	RES,CHIP	430	5%	1/8W
R587	1-216-186-00	RES,CHIP	330	5%	1/8W
R588	1-216-186-00	RES,CHIP	330	5%	1/8W
R591	1-216-183-00	RES,CHIP	240	5%	1/8W
R592	1-216-183-00	RES,CHIP	240	5%	1/8W
R593	1-216-183-00	RES,CHIP	240	5%	1/8W
R594	1-216-183-00	RES,CHIP	240	5%	1/8W
R595	1-216-183-00	RES,CHIP	240	5%	1/8W
R596	1-216-183-00	RES,CHIP	240	5%	1/8W
R597	1-216-206-00	RES,CHIP	2.2K	5%	1/8W
R598	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
		< ROTARY ENCODER >			
RE551	1-475-014-11	ENCODER, ROTARY			
		< SWITCH >			
S551	1-572-704-31	SWITCH, KEY BOARD (⏏)			
S552	1-572-704-31	SWITCH, KEY BOARD (DSPL)			
S553	1-572-704-31	SWITCH, KEY BOARD (SENS)			
S554	1-572-704-31	SWITCH, KEY BOARD (SOUND)			
S555	1-572-704-31	SWITCH, KEY BOARD (MODE)			
S556	1-771-290-11	SWITCH, SLIDE (SEEK/AMS ⏮ ◀◀ -/▶▶⏭ ▶▶ +)			
S557	1-572-704-31	SWITCH, KEY BOARD (1)			
S558	1-572-704-31	SWITCH, KEY BOARD (2)			
S561	1-572-704-31	SWITCH, KEY BOARD (OFF)			
S562	1-572-704-31	SWITCH, KEY BOARD (SOURCE)			
S563	1-572-704-31	SWITCH, KEY BOARD (3)			
S564	1-572-704-31	SWITCH, KEY BOARD (4)			
S565	1-572-704-31	SWITCH, KEY BOARD (5)			
S566	1-572-704-31	SWITCH, KEY BOARD (6)			
S567	1-762-937-11	SWITCH, ROTARY (D-BASS)			
S581	1-572-704-31	SWITCH, KEY BOARD (RESET)			

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*	1-659-835-12	LIMIT BOARD			
		**********			
		< SWITCH >			
SW3	1-572-688-11	SWITCH, PUSH (1 KEY)			

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*	1-659-837-11	LOAD BOARD			
		**********			
		< SWITCH >			
SW4	1-572-288-21	SWITCH, PUSH			

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Ref. No.	Part No.	Description			Remark
*	A-3294-553-A	MAIN BOARD, COMPLETE (CDX-2250)			
		**********			
*	A-3294-635-A	MAIN BOARD, COMPLETE (CDX-3500)			
		**********			
	7-685-792-09	SCREW +PTT 2.6X6 (S)			
	7-685-793-09	SCREW +PTT 2.6X8 (S)			
	7-685-794-09	SCREW +PTT 2.6X10 (S)			
*	3-019-565-01	BRACKET (IC)			
*	3-030-849-01	HEAT SINK (T)			
*	3-030-850-01	HEAT SINK (REG)			
		< CAPACITOR >			
C101	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C102	1-162-587-11	CERAMIC CHIP	0.039uF	10%	25V
C103	1-164-346-11	CERAMIC CHIP	1uF		16V
C104	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V (CDX-3500)
C104	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V (CDX-2250)
C105	1-124-233-11	ELECT	10uF	20%	16V
C106	1-124-233-11	ELECT	10uF	20%	16V
C107	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C108	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C109	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C110	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C111	1-164-346-11	CERAMIC CHIP	1uF		16V
C112	1-164-346-11	CERAMIC CHIP	1uF		16V
C113	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C114	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C115	1-124-233-11	ELECT	10uF	20%	16V
C116	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C117	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C118	1-124-233-11	ELECT	10uF	20%	16V
C201	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C202	1-162-587-11	CERAMIC CHIP	0.039uF	10%	25V
C203	1-164-346-11	CERAMIC CHIP	1uF		16V
C205	1-124-233-11	ELECT	10uF	20%	16V
C206	1-124-233-11	ELECT	10uF	20%	16V
C207	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C208	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C209	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C210	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C211	1-164-346-11	CERAMIC CHIP	1uF		16V
C212	1-164-346-11	CERAMIC CHIP	1uF		16V
C213	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C214	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C215	1-124-233-11	ELECT	10uF	20%	16V
C216	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C217	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C218	1-124-233-11	ELECT	10uF	20%	16V
C401	1-124-233-11	ELECT	10uF	20%	16V
C405	1-126-514-11	ELECT	22uF	20%	16V
C407	1-124-259-11	ELECT	4.7uF	20%	16V
C408	1-164-346-11	CERAMIC CHIP	1uF		16V
C409	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C410	1-104-663-11	ELECT	33uF	20%	25V (CDX-2250)

MAIN

Ref. No.	Part No.	Description			Remark
C411	1-124-465-00	ELECT	0.47uF	20%	50V
C412	1-164-346-11	CERAMIC CHIP	1uF		16V
C413	1-124-242-00	ELECT	33uF	20%	25V
C414	1-164-346-11	CERAMIC CHIP	1uF		16V
C501	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C601	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C602	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C603	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C604	1-126-514-11	ELECT	22uF	20%	16V
C605	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C606	1-126-786-11	ELECT	47uF	20%	16V
C607	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C609	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C610	1-124-233-11	ELECT	10uF	20%	16V
C611	1-124-464-11	ELECT	0.22uF	20%	50V
C612	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C613	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C614	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V (CDX-3500)
C614	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (CDX-2250)
C615	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V (CDX-3500)
C615	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V (CDX-2250)
C617	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C619	1-163-018-00	CERAMIC CHIP	5600PF	10%	50V (CDX-2250)
C619	1-163-020-00	CERAMIC CHIP	0.0082uF	10%	50V (CDX-3500)
C625	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C701	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C702	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C703	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C704	1-124-233-11	ELECT	10uF	20%	16V
C705	1-124-589-11	ELECT	47uF	20%	16V
C708	1-124-233-11	ELECT	10uF	20%	16V
C709	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C712	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C713	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C714	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C801	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C802	1-163-205-00	CERAMIC CHIP	0.001uF	5%	50V
C804	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C805	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C807	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C808	1-163-234-11	CERAMIC CHIP	20PF	5%	50V
C814	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C830	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C831	1-163-077-00	CERAMIC CHIP	0.1uF	10%	25V
C901	1-124-257-00	ELECT	2.2uF	20%	50V
C902	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C903	1-124-257-00	ELECT	2.2uF	20%	50V
C904	1-110-654-11	ELECT(BLOCK)	0.047F	0%	0
C907	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C908	1-124-465-00	ELECT	0.47uF	20%	50V
C909	1-126-768-11	ELECT	2200uF	20%	16V
C910	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C911	1-124-259-11	ELECT	4.7uF	20%	16V
C913	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C914	1-126-162-11	ELECT	3.3uF	20%	50V (CDX-2250)
C915	1-124-257-00	ELECT	2.2uF	20%	50V
C916	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
		< CONNECTOR >			
CNJ601	1-785-006-11	JACK (ANT)			
CNP701	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P			
CNP801	1-563-614-31	CONNECTOR, FLEXIBLE 11P			
CNP901	1-774-701-11	PIN, CONNECTOR 16P			
		< COMPOSITION CIRCUIT BLOCK >			
CP601	1-519-504-11	GAP, DISCHARGE			
		< DIODE >			
D401	8-719-109-71	DIODE RD3.9ES-B1			
D402	8-719-991-33	DIODE 1SS133T-77			
D604	8-719-991-33	DIODE 1SS133T-77			
D701	8-719-991-33	DIODE 1SS133T-77 (CDX-2250)			
D811	8-719-991-33	DIODE 1SS133T-77			
D812	8-719-109-93	DIODE RD6.2ESB2			
D901	8-719-929-15	DIODE MTZJ-T-77-9.1B			
D902	8-719-929-15	DIODE MTZJ-T-77-9.1B			
D903	8-719-109-89	DIODE RD5.6ESB2			
D904	8-719-109-89	DIODE RD5.6ESB2			
D905	8-719-109-93	DIODE RD6.2ESB2			
D906	8-719-923-91	DIODE MTZJ-T-77-16A			
D907	8-719-049-38	DIODE 1N5404TU			
D908	8-719-200-82	DIODE 11ES2			
D910	8-719-109-93	DIODE RD6.2ESB2			
D911	8-719-991-33	DIODE 1SS133T-77			
D914	8-719-200-82	DIODE 11ES2 (CDX-3500)			
D916	8-719-200-82	DIODE 11ES2			
D917	8-719-200-82	DIODE 11ES2			
D918	8-719-200-82	DIODE 11ES2			
D921	8-719-109-97	DIODE RD6.8ES-B2			
		< IC >			
IC401	8-759-487-82	IC LC75374E			
IC402	8-759-572-08	IC TDA7385			
IC701	8-759-464-81	IC PCM1717E-ST2			
IC801	8-759-585-18	IC uPD17705GC-537-3B9			
		< JUMPER RESISTOR >			
JR3	1-216-295-00	SHORT	0		
JR4	1-216-296-00	SHORT	0 (CDX-3500)		
JR4	1-216-864-11	METAL CHIP	0	5%	1/16W
JR5	1-216-296-00	SHORT	0		
JR6	1-216-296-00	SHORT	0		
JR7	1-216-296-00	SHORT	0		
JR11	1-216-296-00	SHORT	0		
JR13	1-216-295-00	SHORT	0		
JR14	1-216-296-00	SHORT	0		
JR15	1-216-295-00	SHORT	0		
JR16	1-216-295-00	SHORT	0		
JR17	1-216-296-00	SHORT	0		
JR18	1-216-295-00	SHORT	0		

Ref. No.	Part No.	Description			Remark
JR19	1-216-296-00	SHORT	0		
JR22	1-216-295-00	SHORT	0		
JR24	1-216-295-00	SHORT	0		
JR27	1-216-295-00	SHORT	0		
JR28	1-216-864-11	METAL CHIP	0	5%	1/16W
JR29	1-216-295-00	SHORT	0 (CDX-2250)		
JR30	1-216-295-00	SHORT	0 (CDX-2250)		
JR31	1-216-296-00	SHORT	0		
JR33	1-216-295-00	SHORT	0		
JR34	1-216-295-00	SHORT	0		
JR35	1-216-296-00	SHORT	0		
JR36	1-216-296-00	SHORT	0		
JR37	1-216-296-00	SHORT	0		
JR39	1-216-295-00	SHORT	0		
JR45	1-216-296-00	SHORT	0		
JR45	1-216-296-00	SHORT	0		
JR46	1-216-296-00	SHORT	0		
JR46	1-216-296-00	SHORT	0		
JR47	1-216-296-00	SHORT	0 (CDX-2250)		
JR48	1-216-295-00	SHORT	0 (CDX-2250)		
JR60	1-216-295-00	SHORT	0		
JR86	1-216-295-00	SHORT	0 (CDX-2250)		
JR90	1-216-295-00	SHORT	0		
		< COIL >			
L601	1-414-137-31	INDUCTOR	0.22uH		
L602	1-410-521-11	INDUCTOR	100uH		
L801	1-410-513-11	INDUCTOR	22uH		
L901	1-416-539-11	INDUCTOR	370uH		
		< JACK >			
PJ401	1-785-628-11	JACK, PIN 4P LINE OUT			
		< TRANSISTOR >			
Q101	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q102	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q201	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q202	8-729-920-21	TRANSISTOR	DTC314TKH04		
Q401	8-729-027-52	TRANSISTOR	DTC124EKA-T146		
Q402	8-729-901-05	TRANSISTOR	DTA124EK		
Q601	8-729-030-51	TRANSISTOR	2SA1515S-R-TP		
Q602	8-729-030-51	TRANSISTOR	2SA1515S-R-TP		
Q605	8-729-620-06	TRANSISTOR	2SC3052-EF		
Q606	8-729-620-06	TRANSISTOR	2SC3052-EF		
Q801	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q901	8-729-019-00	TRANSISTOR	2SD2394-G		
Q902	8-729-901-05	TRANSISTOR	DTA124EK		
Q904	8-729-015-11	TRANSISTOR	2SD1802FAST-TL		
Q905	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q906	8-729-901-05	TRANSISTOR	DTA124EK		
Q907	8-729-019-00	TRANSISTOR	2SD2394-G		
Q908	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q909	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q910	8-729-920-85	TRANSISTOR	2SD1664-QR		
Q911	8-729-620-06	TRANSISTOR	2SC3052-EF		
Q912	8-729-620-06	TRANSISTOR	2SC3052-EF		
Q913	8-729-027-43	TRANSISTOR	DTC114EKA-T146		

Ref. No.	Part No.	Description			Remark
Q915	8-729-822-84	TRANSISTOR	2SB1202FAST		
Q916	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
Q917	8-729-101-07	TRANSISTOR	2SB798-DL		
Q918	8-729-027-43	TRANSISTOR	DTC114EKA-T146		
		< RESISTOR >			
R101	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W
R103	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R104	1-216-214-00	RES,CHIP	4.7K	5%	1/8W
R105	1-216-049-11	RES,CHIP	1K	5%	1/10W
R106	1-216-049-11	RES,CHIP	1K	5%	1/10W
R107	1-216-075-00	METAL CHIP	12K	5%	1/10W
R108	1-216-075-00	METAL CHIP	12K	5%	1/10W
R109	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R110	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R111	1-216-083-00	METAL CHIP	27K	5%	1/10W
R112	1-216-083-00	METAL CHIP	27K	5%	1/10W
R113	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R201	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R203	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R204	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R205	1-216-049-11	RES,CHIP	1K	5%	1/10W
R206	1-216-049-11	RES,CHIP	1K	5%	1/10W
R207	1-216-075-00	METAL CHIP	12K	5%	1/10W
R208	1-216-075-00	METAL CHIP	12K	5%	1/10W
R209	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R210	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R211	1-216-083-00	METAL CHIP	27K	5%	1/10W
R212	1-216-083-00	METAL CHIP	27K	5%	1/10W
R213	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R401	1-216-113-00	METAL CHIP	470K	5%	1/10W
R402	1-216-049-11	RES,CHIP	1K	5%	1/10W
R601	1-216-221-00	RES,CHIP	9.1K	5%	1/8W (CDX-3500)
R601	1-216-230-00	RES,CHIP	22K	5%	1/8W (CDX-2250)
R602	1-249-417-11	CARBON	1K	5%	1/4W F
R603	1-249-417-11	CARBON	1K	5%	1/4W F
R604	1-216-077-00	METAL CHIP	15K	5%	1/10W (CDX-2250)
R605	1-216-077-00	METAL CHIP	15K	5%	1/10W (CDX-2250)
R607	1-216-025-00	RES,CHIP	100	5%	1/10W
R608	1-216-081-00	METAL CHIP	22K	5%	1/10W
R611	1-216-049-11	RES,CHIP	1K	5%	1/10W
R612	1-216-049-11	RES,CHIP	1K	5%	1/10W
R613	1-216-049-11	RES,CHIP	1K	5%	1/10W
R614	1-216-049-11	RES,CHIP	1K	5%	1/10W
R615	1-249-429-11	CARBON	10K	5%	1/4W
R616	1-249-417-11	CARBON	1K	5%	1/4W F
R617	1-216-049-11	RES,CHIP	1K	5%	1/10W
R618	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R620	1-247-807-31	CARBON	100	5%	1/4W
R622	1-216-081-00	METAL CHIP	22K	5%	1/10W
R701	1-216-025-00	RES,CHIP	100	5%	1/10W
R702	1-216-025-00	RES,CHIP	100	5%	1/10W

MAIN **SERVO**

Ref. No.	Part No.	Description			Remark
R703	1-216-025-00	RES,CHIP	100	5%	1/10W
R704	1-216-033-00	METAL CHIP	220	5%	1/10W
R706	1-216-037-00	METAL CHIP	330	5%	1/10W
R707	1-216-027-00	METAL CHIP	120	5%	1/10W
R801	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R804	1-216-105-00	RES,CHIP	220K	5%	1/10W (CDX-3500)
R805	1-216-105-00	RES,CHIP	220K	5%	1/10W
R806	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R807	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R808	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R809	1-216-073-00	METAL CHIP	10K	5%	1/10W
R810	1-216-105-00	RES,CHIP	220K	5%	1/10W
R812	1-216-073-00	METAL CHIP	10K	5%	1/10W
R813	1-216-073-00	METAL CHIP	10K	5%	1/10W
R814	1-216-049-11	RES,CHIP	1K	5%	1/10W
R815	1-216-049-11	RES,CHIP	1K	5%	1/10W
R817	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R818	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R819	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R820	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R821	1-249-417-11	CARBON	1K	5%	1/4W F
R822	1-249-417-11	CARBON	1K	5%	1/4W F
R823	1-216-049-11	RES,CHIP	1K	5%	1/10W
R824	1-216-105-00	RES,CHIP	220K	5%	1/10W
R825	1-216-105-00	RES,CHIP	220K	5%	1/10W
R826	1-216-105-00	RES,CHIP	220K	5%	1/10W
R827	1-216-234-00	RES,CHIP	33K	5%	1/8W
R828	1-216-254-00	RES,CHIP	220K	5%	1/8W
R829	1-216-254-00	RES,CHIP	220K	5%	1/8W
R830	1-216-254-00	RES,CHIP	220K	5%	1/8W
R831	1-216-089-00	RES,CHIP	47K	5%	1/10W
R832	1-216-073-00	METAL CHIP	10K	5%	1/10W
R833	1-216-049-11	RES,CHIP	1K	5%	1/10W
R834	1-216-049-11	RES,CHIP	1K	5%	1/10W
R836	1-216-049-11	RES,CHIP	1K	5%	1/10W
R837	1-249-441-11	CARBON	100K	5%	1/4W
R839	1-216-049-11	RES,CHIP	1K	5%	1/10W
R840	1-216-105-00	RES,CHIP	220K	5%	1/10W
R841	1-216-105-00	RES,CHIP	220K	5%	1/10W
R843	1-216-109-00	METAL CHIP	330K	5%	1/10W
R844	1-216-117-00	METAL CHIP	680K	5%	1/10W
R845	1-249-429-11	CARBON	10K	5%	1/4W
R852	1-216-049-11	RES,CHIP	1K	5%	1/10W
R901	1-216-182-00	RES,CHIP	220	5%	1/8W
R902	1-216-182-00	RES,CHIP	220	5%	1/8W
R903	1-216-182-00	RES,CHIP	220	5%	1/8W
R904	1-249-395-11	CARBON	15	5%	1/4W F
R905	1-216-077-00	METAL CHIP	15K	5%	1/10W
R906	1-216-079-00	METAL CHIP	18K	5%	1/10W
R907	1-216-079-00	METAL CHIP	18K	5%	1/10W
R908	1-216-089-00	RES,CHIP	47K	5%	1/10W
R909	1-216-105-00	RES,CHIP	220K	5%	1/10W
R911	1-216-296-00	SHORT	0		
R912	1-216-049-11	RES,CHIP	1K	5%	1/10W
R913	1-249-421-11	CARBON	2.2K	5%	1/4W F
R914	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R915	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R916	1-216-077-00	METAL CHIP	15K	5%	1/10W
R917	1-216-049-11	RES,CHIP	1K	5%	1/10W
R918	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R919	1-216-105-00	RES,CHIP	220K	5%	1/10W
		< SWITCH >			
S802	1-571-478-11	SWITCH, SLIDE (CDX-3500)			
		< THERMISTOR >			
TH901	1-809-148-11	THERMISTOR PTH8L07AR2R0M1B510			
		< TUNER >			
TU01	A-3301-697-A	TUNER UNIT			
		< VIBRATOR >			
X701	1-579-345-11	VIBRATOR, CERAMIC (16.9MHz)			
X801	1-760-223-11	VIBRATOR, CRYSTAL (4.5MHz)			

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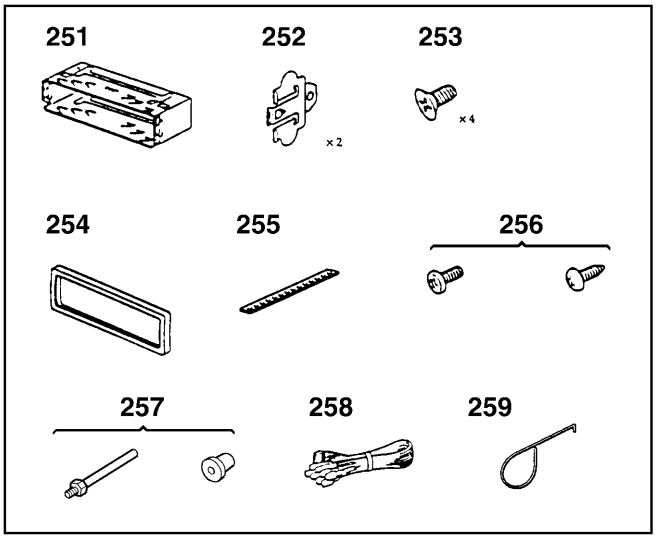
*	A-3309-227-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C2	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C3	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C4	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C6	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C7	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C9	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C10	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C11	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C12	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C13	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C14	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C15	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C16	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C17	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C18	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C19	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C20	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C21	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C22	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C23	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C24	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C25	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C26	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C27	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C28	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C29	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C30	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C31	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C32	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C33	1-124-779-00	ELECT CHIP	10uF	20%	16V
C34	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C35	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V

Ref. No.	Part No.	Description			Remark
C36	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C37	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C38	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C39	1-126-204-11	ELECT CHIP	47uF	20%	16V
C40	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN1	1-764-616-12	HOUSING,CONNECTOR(PC BOARD)30P			
CN2	1-565-728-51	CONNECTOR, FPC 17P			
CN3	1-770-347-21	CONNECTOR, FPC 6P			
		< IC >			
IC1	8-752-372-94	IC CXD2507AQ			
IC2	8-752-074-34	IC CXA1782BQ			
IC3	8-759-354-16	IC BA6796FP-T1			
		< JUMPER RESISTOR >			
JR1	1-216-296-00	SHORT	0		
JR2	1-216-296-00	SHORT	0		
JR3	1-216-296-00	SHORT	0		
JR4	1-216-296-00	SHORT	0		
JR5	1-216-296-00	SHORT	0		
JR6	1-216-296-00	SHORT	0		
JR7	1-216-296-00	SHORT	0		
JR8	1-216-296-00	SHORT	0		
JR9	1-216-296-00	SHORT	0		
JR10	1-216-296-00	SHORT	0		
JR11	1-216-296-00	SHORT	0		
JR12	1-216-296-00	SHORT	0		
JR13	1-216-296-00	SHORT	0		
JR14	1-216-296-00	SHORT	0		
JR15	1-216-296-00	SHORT	0		
JR16	1-216-296-00	SHORT	0		
JR17	1-216-296-00	SHORT	0		
JR18	1-216-296-00	SHORT	0		
JR19	1-216-296-00	SHORT	0		
JR20	1-216-296-00	SHORT	0		
JR21	1-216-296-00	SHORT	0		
JR22	1-216-296-00	SHORT	0		
JR23	1-216-296-00	SHORT	0		
JR24	1-216-296-00	SHORT	0		
JR25	1-216-296-00	SHORT	0		
JR26	1-216-296-00	SHORT	0		
JR27	1-216-296-00	SHORT	0		
JR28	1-216-296-00	SHORT	0		
JR29	1-216-296-00	SHORT	0		
JR30	1-216-296-00	SHORT	0		
JR31	1-216-296-00	SHORT	0		
JR32	1-216-296-00	SHORT	0		
JR33	1-216-296-00	SHORT	0		
JR34	1-216-296-00	SHORT	0		
JR35	1-216-296-00	SHORT	0		
JR36	1-216-296-00	SHORT	0		
JR37	1-216-296-00	SHORT	0		
JR38	1-216-296-00	SHORT	0		
JR39	1-216-296-00	SHORT	0		
JR40	1-216-296-00	SHORT	0		

Ref. No.	Part No.	Description			Remark
JR41	1-216-296-00	SHORT	0 (CDX-2250)		
JR43	1-216-296-00	SHORT	0		
JR44	1-216-296-00	SHORT	0		
JR45	1-216-296-00	SHORT	0		
JR46	1-216-296-00	SHORT	0		
		< COIL >			
L1	1-412-058-11	INDUCTOR CHIP	10uH		
L2	1-412-058-11	INDUCTOR CHIP	10uH		
L3	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q1	8-729-904-60	TRANSISTOR DTB113ZK			
Q2	8-729-904-86	TRANSISTOR 2SB1197K-Q			
		< RESISTOR >			
R1	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2	1-216-097-00	RES,CHIP	100K	5%	1/10W
R3	1-216-121-00	RES,CHIP	1M	5%	1/10W
R4	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R5	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R6	1-216-073-00	METAL CHIP	10K	5%	1/10W
R7	1-216-009-00	RES,CHIP	22	5%	1/10W
R8	1-216-119-00	METAL CHIP	820K	5%	1/10W
R9	1-216-119-00	METAL CHIP	820K	5%	1/10W
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W
R11	1-216-073-00	METAL CHIP	10K	5%	1/10W
R14	1-216-085-00	METAL CHIP	33K	5%	1/10W
R15	1-216-085-00	METAL CHIP	33K	5%	1/10W
R16	1-216-077-00	METAL CHIP	15K	5%	1/10W
R17	1-216-081-00	METAL CHIP	22K	5%	1/10W
R19	1-216-079-00	METAL CHIP	18K	5%	1/10W
R20	1-216-105-00	RES,CHIP	220K	5%	1/10W
R21	1-216-105-00	RES,CHIP	220K	5%	1/10W
R22	1-216-085-00	METAL CHIP	33K	5%	1/10W
R23	1-216-121-00	RES,CHIP	1M	5%	1/10W
R24	1-216-073-00	METAL CHIP	10K	5%	1/10W
R27	1-216-295-00	SHORT	0		
R28	1-216-101-00	METAL CHIP	150K	5%	1/10W
R29	1-216-097-00	RES,CHIP	100K	5%	1/10W
R30	1-216-097-00	RES,CHIP	100K	5%	1/10W
R31	1-216-081-00	METAL CHIP	22K	5%	1/10W
R32	1-216-109-00	METAL CHIP	330K	5%	1/10W
R33	1-216-105-00	RES,CHIP	220K	5%	1/10W
R34	1-216-009-00	RES,CHIP	22	5%	1/10W
R35	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R36	1-216-097-00	RES,CHIP	100K	5%	1/10W
R37	1-216-117-00	METAL CHIP	680K	5%	1/10W
R38	1-216-109-00	METAL CHIP	330K	5%	1/10W
R39	1-216-101-00	METAL CHIP	150K	5%	1/10W
R40	1-216-114-00	RES,CHIP	510K	5%	1/10W
R41	1-216-093-00	RES,CHIP	68K	5%	1/10W
R42	1-216-103-00	METAL CHIP	180K	5%	1/10W
R43	1-216-097-00	RES,CHIP	100K	5%	1/10W
R44	1-216-085-00	METAL CHIP	33K	5%	1/10W
R45	1-216-081-00	METAL CHIP	22K	5%	1/10W
R45	1-216-089-00	RES,CHIP	47K	5%	1/10W
R46	1-216-097-00	RES,CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R47	1-216-105-00	RES,CHIP	220K	5%	1/10W
R48	1-216-073-00	METAL CHIP	10K	5%	1/10W
R49	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R50	1-216-065-00	RES,CHIP	4.7K	5%	1/10W
R51	1-216-295-00	SHORT	0		
		< VARIABLE RESISTOR >			
RV1	1-238-091-11	RES, ADJ, CERMET 22K			
RV4	1-238-091-11	RES, ADJ, CERMET 22K			
*	1-659-834-11	SUB BOARD			
		< CONNECTOR >			
CN1	1-770-347-21	CONNECTOR, FPC 6P			
		MISCELLANEOUS			
3	1-769-786-81	CORD (WITH CONNECTOR)			
66	1-783-268-11	CABLE, FLAT			
⚠210	8-820-010-06	PICK-UP, OPTICAL KSS-521A/Q-NP			
257	1-769-786-81	CORD (WITH CONNECTOR)			
F901	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) 10A			
TU01	A-3301-697-A	TUNER ASSY			
LCD551	1-803-439-21	DISPLAY PANEL, LIQUID CRYSTAL			
M901	X-3371-664-2	MOTOR ASSY (SPINDLE)			
M902	A-3291-674-A	MOTOR ASSY, SLED			
M903	A-3291-676-A	MOTOR SUB ASSY, LOADING			
		ACCESSORIES & PACKING MATERIALS			
	3-865-650-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH,FRENCH)(CDX-2250)			
	3-865-650-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH,SPANISH,CHINESE)(CDX-3500)			
	3-865-652-11	MANUAL, INSTRUCTION (ENGLISH)(CDX-2250)			
	3-865-652-21	MANUAL, INSTRUCTION (FRENCH)(CDX-2250:CND)			
	3-865-652-31	MANUAL, INSTRUCTION (ENGLISH,SPANISH,CHINESE)(CDX-3500)			

Ref. No.	Part No.	Description	Remark
		HARDWARE LIST	
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#2	7-685-793-09	SCREW +PTT 2.6X8 (S)	
#3	7-685-794-09	SCREW +PTT 2.6X10 (S)	
#4	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
#5	7-627-850-28	SCREW,PRECISION +P 1.4X3	
#6	7-627-000-00	SCREW,PRECISION +P1.7X2.2TYPE3	
#7	7-628-253-00	SCREW +PS 2X4	
#8	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3	
#9	7-627-553-17	PRECISION SCREW +P 2X2 TYPE 3	
		PARTSFOR INSTALLATION AND CONNECTIONS	
251	3-014-370-21	FRAME, FITTING	
252	3-931-977-01	BRACKET	
253	3-934-325-01	SCREW (+K 5X8 TP)	
254	3-019-569-01	COLLAR	
255	3-916-012-01	BRACKET (ND), FITTING ASSIST (CDX-2250)	
256	X-3368-725-1	SCREW ASSY, FITTING (CDX-2250)	
257	X-3366-405-1	SCREW ASSY (EXP), FITTING (CDX-3500)	
258	1-769-786-81	CORD (WITH CONNECTOR) (POWER)	
259	3-035-161-01	BRACKET (RELEASE)	



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.